OPEN UNIVERSITIES THE IVORY TOWERS THROWN OPEN

Edited by

G. Ram Reddy

A silent revolution in education is taking place all over the world. It is the emergence of distance education as an alternative system of education. In recent years distance education through open universities has been catching up in several countries—developed and developing, socialist and non-socialist. In Asia, a number of countries have started open universities during the last three decades. In India, the Government set up the Indira Gandhi National Open University (IGNOU) in 1985. At the state level, the Andhra Pradesh Open University has been functioning since 1982.

At the time of the foundation-stone laying ceremony of the IGNOU, an international seminar was organised. The papers presented at it form the contents of this book. These have been supplemented by papers, specially commissioned, on countries like Pakistan, Thailand and Sri Lanka, which could not take part in the seminar. The volume provides an exhaustive coverage of the organisation and working of open universities in Canada, China, the Federal Republic of Germany, India, Indonesia, Japan, the Republic of Korea, Pakistan, Spain, Sri Lanka, Thailand and the United Kingdom.

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TO MY WIFE,
G. PRAMILA, WHO HAS BEEN A SILENT SUPPORTER IN ALL MY ENDEAVOURS

EDITOR'S PREFACE AND ACKNOWLEDGEMENTS

For centuries, education has been the monopoly of the privileged few; a few were in, but many were out. Just as in the economic sphere, in education too there has been a great divide the—gap between the haves and have nots. The emergence of the new educational technologies have triggered a revolutionary process, a process which holds the promise of bridging this gulf. Distance Education is one significant development that the new technologies of education have made possible.

All over the world the Open Universities are being organised to provide innovative, flexible and high quality distance education. This is being done to meet the diverse educational needs of the people who cannot, for a variety of reasons, go to the conventional system, but who would now like to have access to higher education.

The Prime Minister, Mr. Rajiv Gandhi, in his broadcast to the Nation in January 1985, expressed the intention of his Government to start a National Open University to provide wider access to education. The Government of India in its National Policy on Education has laid the emphasis, among other things, on distance education through open university system. The setting up of the Indira Gandhi National Open University (IGNOU) is in fulfilment of the policy of the Government towards the distance education.

At the time of the foundation laying ceremony of IGNOU an International Seminar was organised. The papers presented at the Seminar were found to be very useful and informative. Since there is not much literature on Open Universities several friends have advised me to update the papers and publish them. This book is the result of such an advice.

The papers which were presented at the Seminar have been revised and updated. Three new papers have been added—Allama Iqbal Open Universiry, Sukhothai Thammathirat Open University, and The Open University of Sri Lanka. In addition, the introductory chapter has been added which provides conceptual perspective to the papers in the volume.

It is hoped that this book, which contains essentially the case studies of 13 Open Universities, will throw some light on the organisation and working of Open Universities. This modest effort will partially help those who are interested in knowing about these new institutions.

I have attempted to ensure that the facts presented in the book are accurate. However, if there is any error, I take the responsibility.

It is extremely difficult to do a book of this kind which deals with 12 different countries. Collection of material and making it up to date is a Herculean task. This would not have been possible without the cooperation of the contributors from the countries covered in the volume. In particular, I am grateful to Prof. Yoshiya Abe, Prof. Jose Luis Garcia Garrido, Prof. Chan-Dong Kim, Prof. Badri Nath Koul, Prof. Manoranjan Mohanty, Prof. Terrence Morrison, Prof. Otto Peters, Prof. D. Ravindra Prasad, Prof. C. Narayana Reddy, Prof. Dipak Saraswati, Mr. P. Satyanarayana, Prof. Bakhshish Singh, Prof. Ralph C. Smith, Prof. Atwi Suparman, Prof. D.S. Wijeyesekara, Prof. Zaho Yuhui, for taking the trouble of not only writing the papers but also revising them. In addition, Prof. G.A. Allana of Allama Iqbal Open University, and Prof. Wichit Srisa-an of Sukhothai Thammathirat Open University, have been of great help by sharing the experience of their institutions. I am specially thankful to Prof. D.S. Wijeyesekara, who at the last minute agreed to contribute a paper on The Open University of Sri Lanka. Several of my colleagues have helped me in various ways in the preparation of this book. It is not possible to mention the names of all of them. However, I would like to acknowledge the help of the following: Prof. B.S. Sharma, Prof-Vice-Chancellor (Academic), Prof. D. Ravindra Prasad, who is now Director of Regional Centre for Urban and Environment Studies, Osmania University Campus, Hyderabad, Dr. S.N. Chaturvedi, Director (RSD), Mr. P. Satyanarayana, Regional Director, Hyderabad, Mr. K. Laxman, Deputy Registrar, Mr. M.K. Khanna, Section Officer, who were very helpful in organising this Seminar. My special thanks are due to Dr. G.S. Rao, Editor, Dr. Mohan B. Menon, who have assisted me in editing this volume. I owe a special debt of gratitude to Dr. Shyam B. Menon, who cheerfully shouldered the burden of going through the proofs. My thanks are due to Mr. S. Srinivasan, Mr. P.P. Rao, Mr. B.B. Mehra, Mrs Neeta Grover, whose untiring efforts are mainly responsible for making the manuscript ready for press. Finally, the Publishers: I appreciate the keen interest evinced by Sterling Publishers, in particular, Mr. O.P. Ghai and Mr. S.K. Ghai.

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CONTENTS

Editor's preface and acknowledgements
About the contributors

1. OPEN UNIVERSITIES: THE NEW TEMPLES OF LEARNING 1
G. Ram Reddy

CANADA

2. ATHABASCA UNIVERSITY—RESPONDING AND ADAPTING TO CHANGE 19
Terrence R. Morrison and Dipak Saraswati

CHINA

3. CURRENT EDUCATIONAL REFORMS IN CHINA: WITH SPECIAL REFERENCE TO CENTRAL RADIO AND TELEVISION UNIVERSITY 44
Manoranjan Mohanty

4. DISTANCE EDUCATION WITH NATIONAL CHARACTERISTICS 56
Zhao Yuhui

FEDERAL REPUBLIC OF GERMANY

5. THE FERNUNIVERSITÄT 75
G. Ram Reddy

6. TRADITION AND INNOVATION—THE FERNUNIVERSITÄT IN HAGEN 82
Otto Peters

INDIA

7. DISTANCE EDUCATION: THE EXPERIENCES OF ANDHRA PRADESH OPEN UNIVERSITY 94
C. Narayana Reddy

8. INDIRA GANDHI NATIONAL OPEN UNIVERSITY: ITS ROLE IN HIGHER EDUCATION 107
G. Ram Reddy

INDONESIA

9. MANAGEMENT AND DEVELOPMENT SYSTEM OF UNIVERSITAS TERBUKA 124
Atwi Suparman

JAPAN

10. THE JAPANESE UNIVERSITY OF THE AIR 145
Yoshiya Abe

REPUBLIC OF KOREA

11. THE KOREA AIR AND CORRESPONDENCE UNIVERSITY 161
Chan-Dong Kim

PAKISTAN

12. THE ALLAMA IQBAL OPEN UNIVERSITY 178
P. Satyanarayana and B.N. Koul

SPAIN

13. THE SPANISH UNED: ONE WAY TO A NEW FUTURE 200
Jose Luis Garcia Garrido

SRI LANKA

14. THE OPEN UNIVERSITY OF SRI LANKA 215
D.S. Wijeyesekera

THAILAND

15. THE SUKHOTHAI THAMMATHIRAT OPEN UNIVERSITY 225
D. Ravindra Prasad

UNITED KINGDOM

16. DEVELOPING DISTANCE LEARNING SYSTEMS—THE UKOU EXPERIMENT: SOME LESSONS 235
Ralph C. Smith

CONCLUSION

17. DISTANCE EDUCATION: THE EXPERIENCES OF OPEN UNIVERSITIES 253
Bakhshish Singh

Appendix 263
Index 265

1

OPEN UNIVERSITIES: THE NEW TEMPLES OF LEARNING

G. RAM REDDY

Among the few innovations in the field of education, Distance Education ranks very high. It has been in existence for quite a few decades, in some form or the other, but thanks to modern communication technologies, its importance is now being realised by educationists and policy makers all over the world. Although distance education is catching up very fast in all countries—developed and developing, socialist and capitalist, western and non-western—it is still little known and less studied. As Keegan points out: "Even a cursory reading of educational literature shows that distance systems are usually ignored. It merits not a paragraph in most volumes of educational philosophy, in guides to administrative practice or in analyses of didactic strategy" (1986:4). Its importance is being realised because of its usefulness and potential not only to provide greater access to education but also its ability to make available an innovative and flexible system of education. No wonder, as I shall describe later, policy makers all over the world are looking to distance education for solving some of their problems. In this chapter I shall deal with three aspects of distance education: (a) What is distance education? (b) Why distance education? and (c) The how of it, i.e., the organisational forms of distance education.

What is Distance Education?

There is no one meaning of the term 'distance education'. It is known by a bewildering variety of nomenclature. In Australia, it is known as the External System. This description is not appreciated very much because it carries vibes of the old London external system which usually provides examination but not teaching (Jevons, 1983:344). Unofficially, it is also known as off-campus study. In some countries, the term 'Correspondence Education' is widely used. But it has increasingly been replaced by the term 'Independent Study' in North America. 'Home Study' is sometimes used to describe correspondence programmes of private schools both in North America and Europe. This is also disliked by many because some of the correspondence institutions, particularly the private ones, have only a profit motive. No doubt, some of them enjoy a very good reputation, but several are far from it. Further, several correspondence institutions depend only on one medium, viz., the print material. The distance education today lays emphasis not only on the print medium but also on several other media. In fact, the multi-media approach is the corner-stone of the distance education system.

In France, it is known as *'télé-enseignement'*; in Germany, it is described as *'Fernstudium'* or *'Fernunterricht'*; and in Spanish-speaking countries, it is described as *'educación a distancia'* (Rumble and Keegan, 1982:11). 'Extramural' refers to distance education in New Zealand. These terms have come in vogue because of the historical circumstances in various countries. They have peculiar characteristics of their own, most of which are similar to distance education. For instance, separation of the student from the teacher is a common characteristic of all of them.

In India, we have been using three terms: 'External Appearance (private appearance)', 'Correspondence Education', and 'Distance Education'. In external appearance, a university permits a student to take the examination as a private candidate, and if he passes, he is given the degree. The university does not take any responsibility to impart education to the students. The second, 'Correspondence Education', has been quite popular in this country. Lately, some of the institutes/universities engaged in 'Correspondence Education' have designated themselves as 'Distance Education' and 'Open University Systems'.

In this connection, it will be useful to know about the two terms which are used interchangeably and about which there has been some controversy: 'Open Learning' and 'Distance Education'. Implicit in 'Open Learning' are innovations and reforms (Ruggles, 1982:1-6). Included are changes that aim at improving such things as the participation of learners, instructional design, methods of transmitting information and support to learners. A very comprehensive document entitled "Open Learning: Systems and Problems in Post Secondary Education" by Mackenzie, Postgate and Scupham (1975:11) which was brought out by the UNESCO describes open learning as follows: "Such systems are designed to offer opportunities for part-time study, for learning at a distance and for innovations in the curriculum. They are intended to allow access to wider sections of adult population, to enable students to compensate for lost opportunities in the past or to acquire new skills and qualifications for the future. Open learning systems aim to redress social or educational inequality and to offer opportunities not provided by conventional colleges or universities." In this system, restrictions on learning are fewer than those in formal educational institutions. Educational opportunities are planned deliberately so that access to knowledge is available to individuals in spite of barriers such as geographical distance. It is argued by some that while distance education is accommodated by an open learning system, the opposite premise may not be true. As Ruggles and his associates argue: ''Not all the distance education programmes have the characteristics of an open learning system. Some are very rigid and inflexible'' (1982:3). In their view, this term may symbolise a new and emerging philosophy that will become more closely associated with learning at a distance.

But other writers like Rumble and Harry (1982:12) find the term 'open learning' unsatisfactory. They quote with approval MacKenzie, Postgate and Scupham that the term 'open learning' poses difficulties. 'Open learning' is an imprecise phrase. Today, a range of meanings can be attached. "It eludes definition." But they write, "as an inscription to be carried in procession on a banner, gather adherents and enthusiasm, it has great potential, for its very imprecision enables it to accommodate many different ideas and aims." The term 'open' generally refers to four aspects: (i) People, since it would not debar applicants on account of their lack of educational qualifications; (ii) Place, in the sense that learning would be home-based and not restricted to classrooms or a campus; (iii) The use of new methods of teaching; and (iv) Ideas (Rumble, and Keegan, : 1982:12). In addition, open accountability is another important aspect of the term 'open'. The course material produced by the open universities is open to scrutiny and is criticised if it is not up to the mark. Secondly, open access is an equally important characteristic of the system. Most of the teaching material is accessible to people who may not be the registered students of an open university—particularly, its radio and TV programmes can be taken advantage of by anyone. Even the print material is available to people other than the students of the open university.

Doubtless, there are several similarities between 'open learning' and 'distance education'. However, the term 'open learning' conveys a certain amount of vagueness about it. Moreover, when we look at the open universities and open learning institutions, we find that all that is conveyed by 'openness' is not to be found in quite a few of these institutions. Open learning, therefore, is not always synonymous with the open university or distance education. Several open universities and open learning institutions prescribe certain entry qualifications and they debar those who do not fulfil the conditions laid down by them. Therefore, if the idea is to provide educational facilities to a larger number of people scattered all over, i.e., providing greater access to education, the term 'distance education' would be more appropriate. This term basically emphasises separation of the teacher and the learner, and planning of educational programmes and material by an educational organisation and the use of technical media on a large scale.

Distance education has been defined by several writers like Wedemeyer, Holmberg, Moore, Peters and Keegan, each emphasising certain aspects of the system. It is, however, to the credit of Desmond Keegan that he has attempted a synthesis of most of the definitions. On the basis of this, he finds that distance education has the following important characteristics:

1. the quasi-permanent separation of teacher and learner throughout the length of the learning process; this distinguishes it from conventional face-to-face education;
2. the influence of an educational organisation both in planning and preparation of learning materials and in the provision of student support services; this distinguishes it from private study and teach-yourself programmes;
3. the use of technical media—print, audio, video or computer—unites teacher and learner and carries the content of the course;
4. the provision of two-way communication so that the student may benefit from or even initiate a dialogue; this distinguishes it from other uses of technology in education;
5. the quasi-permanent absence of a learning group throughout the length of the learning process, so that people are usually taught as individuals and not in groups, with the possibility of occasional meetings for both didactic and socialisation purposes (1986:49).

In addition, he finds that there are two other socio-cultural determinants which are necessary pre-conditions and necessary consequences of distance education. They are: (1) the presence of more industrialised features than in conventional or oral education; and (2) privatisation of institutional learning (1986:50).

The characteristics enumerated by Keegan are basic to the concepts of distance education. They provide the operational facility for the use of distance education. Separation of the teacher and learner emphasises that the latter can learn autonomously. While he can learn on his own, there is the educational organisation which does the planning for him. A variety of media are used to teach the students. Efforts are also made to provide interaction between the teacher and the student. There may be an occasional peer group interaction. On the whole, the student learns on his own which may be described as privatisation of institutional learning.

A noteworthy feature of distance education is that it needs massive organisational effort which is similar to industrial organisations. Thus, we see that distance education institutions have two distinct characteristics—academic and industrial. The 'academic' represents the development and preparation of course materials, whereas 'industrial' refers to production and distribution of these materials (Keegan, 1986:196). Those who are familiar with open universities would know that the latter are among the largest publishers in the world today.

Distance education, thus, represents distance teaching plus distance learning. Anthony Kaye (1981:19-20) presents a systems view of distance education. They are 'operating activities' to describe the activities that directly contribute to import, conversion and export processes which define the nature of the enterprise and differentiate it from other enterprises. The operating activities are split into two: (a) course sub-system, and (b) student sub-system. The second is logistical (maintenance) activities which procure and replenish the resources required by the enterprises. The activities include purchasing, maintenance and repair of buildings and equipment, staff recruitment, training, motivation, etc. The third refers to regulatory activities which relate operations and organisation to the environment. These activities include decision making and higher management functions of planning, financial management, project control and evaluation.

Why Distance Education?

Distance education is being called upon to meet some of the felt-needs in several countries all over the world (Sharma, 1986). The nature of felt-needs varies from country to country, depending upon the stage of its development, but the need for distance education is being recognised both in developed and developing countries for a variety of reasons, some of which are common to all but others are specific to particular countries depending on their individual needs. For instance, in all countries, it is felt that equality of opportunities for education should be provided, and that there should be greater access to higher education (Selim, 1986). Those who have missed educational opportunities earlier should have a second chance. Further, there is a need to provide continuing education to meet the changing requirements of people working in various walks of life. In view of the changed circumstances, there is a need for providing life-long educational opportunities for working people and housewives. These two requirements exist in all countries. But in developing countries, there is a need to meet the shortages of technical manpower which the existing conventional universities are unable to meet. The educational needs of the students who have completed school education and want to go to university are also to be met. It is also realised that education should be made relevant to the needs of the country. Further, the quality of education has to be improved. A system that can meet all these demands has to be innovative and flexible.

In view of certain limitations of the formal education, it is increasingly realised that distance education can meet some of the educational needs in all the countries, irrespective of their ideologies or stages of development. No wonder, several countries in the world practise distance education of one type or the other (Taylor, 1986). Good examples are the U.K., Spain, The Netherlands, France, Australia, Canada, New Zealand, Japan, China, India, Indonesia, Pakistan, Thailand, Korea, The USSR, Venezuela, Costa Rica, etc.

Distance Education—How?

When we look at various distance education institutions in the world, we find that they are of different types. But broadly, as Keegan and Rumble (1982:28) point out, there are two models: (a) Mixed or Hybrid institutions and (b) Autonomous institutions. Although in the mixed model there are several varieties, here we are mainly concerned with distance education programmes run by conventional universities. The best examples of this are the off-campus studies or external programmes run by Australian universities and correspondence courses in India. The advantage of this model is that generally the same courses which are offered to the on-campus students are also offered to the off-campus students. In several cases, the teaching faculty and the examinations taken by the students are also the same. Therefore, the students in such a system have the benefit of the formal system of education. However, in some countries like India, correspondence courses have been facing several problems. They relate to the credibility of the correspondence courses and autonomy of the institutions. It is alleged that the correspondence courses are looked down upon as second class education. It is a system of education which is just tolerated by the conventional system. Further, the correspondence courses institutions have little freedom to formulate their own courses and the rigidities of the conventional system are also applicable to them. The conventional universities, barring a few exceptions, would not like to spend any money on institutes of correspondence courses. The general philosophy which governs correspondence education is that it should be financially self-supporting and "not incur any loss"; it should not be "a liability" to the university. On top of it, the correspondence institutions are expected to earn some money for the university concerned.

The second organisational type of distance education is the autonomous model (Keegan and Rumble, 1982:28). In several countries, full-fledged universities have been started to promote and strengthen distance education. These universities, like their conventional counterparts, are free to frame their academic policies, design the courses, teach the students, examine them and award degrees (Ram Reddy, 1986). Though the university of South Africa is the first full-fledged distance teaching university, the British Open University (UKOU) is regarded as the leader in this field. Its establishment and its high quality work have inspired many other countries. As a result, today we find that open universities have been set up in many parts of the world. Good examples of such countries are West Germany, The Netherlands, Spain, Canada. China, Japan, Thailand, Venezuela, Costa Rica, Sri Lanka, Pakistan, India, Indonesia, Israel etc. While the main features of most open universities are similar they are different from each other in several respects. Each has been established taking into account the peculiar conditions of its country. In other words, each open university has its own national characteristics.

It is with a view to discussing the organisation and working of the open universities in a few selected countries, that a seminar was organised by the newly set up Indira Gandhi National Open

University (IGNOU) in November 1985. The papers for the seminar were written by experts and chief executives from the respective universities and, based on the papers, we shall discuss here some of the important aspects of open universities.

Objectives

Providing a second opportunity to study for those who missed such an opportunity earlier is an objective of almost all the open universities. There are several sections of the society who, for a variety of reasons, could not go to the conventional system and they would now like to have a chance to study. Access to conventional universities is limited in many countries. By establishing an open university, this access is widened to provide equality of opportunities for higher education. There is a shortage of scientific and technical manpower in some countries and the conventional universities are unable to cope with the demand. The open universities are established with a view to meeting such demands. The best example of this is China's Central Radio and Television University (CRTVU).

Improving the quality of education is another objective. This is particularly so in some of the developing countries like Indonesia and India. There is a need to make education relevant to the needs of the country and also to provide life-long education for working people and housewives. Such a system needs to be innovative and flexible which is possible only through distance education. Providing educational opportunities to working adults is the objective of Canada's Athabasca University (AU), Japan's University of the Air (UA), Spain's Universidad Nacional de Educación a Distancia (UNED), India's Indira Gandhi National Open University and the Andhra Pradesh Open University (APOU). Continuing education with a view to meeting the training needs is also an objective common to most of these universities.

The pressures by the secondary school students are increasing in some countries and the conventional universities are unable to meet them. Indonesia has established its Universitas Terbuka (UT) with this as one of its main objectives. The Indira Gandhi National Open University which is the latest to be established has several objectives before it. They are: (a) to provide opportunities for higher education to a large segment of the population; (b) to promote the educational well-being of the community; (c) to encourage the open university and distance education system in the country; and (d) to coordinate and determine the standards of distance education in the country. Open universities are, thus, established with certain definite objectives in view.

Admissions

Admissions into courses are open in some universities but in others they are not so open. The criteria for admissions vary from one institution to the other. In the UKOU, admission is open to all and the university does not insist on formal entrance qualifications for its degree courses; the admission is based on a first-come-first-served basis. Athabasca University admits anybody who is 18 years of age. The Fernuniversität (FU, the University of Terbuka and the Central Radio and Television University admit students only if they have either a formal university entrance qualification or have qualified in the national examinations held. The Indira Gandhi National Open University and the Andhra Pradesh Open University have a dual approach towards admissions into undergraduate programmes. Those who have the formal entry qualifications are eligible to join and those who do not have such qualifications will have to pass the entrance test conducted by the university. In both these universities, admission into B.Sc. courses is restricted only to the first category of students. Thus, we see that the open universities are not totally open and there are varying degrees of restrictions in their openness. They are, however, less closed and restrictive than their conventional counterparts.

Choice of Courses

Generally students of open universities have more freedom than their conventional counterparts to choose their courses. For instance, it is possible in the Andhra Pradesh Open University for a student of philosophy to study chemistry at the undergraduate level, if he so chooses—a combination which is normally not permitted in a conventional system in India.

Three types of programmes—degree, diploma and certificate—are generally offered by several open universities. Degree programmes are the undergraduate courses, and in some cases, Master's and Research. A wide variety of diploma and certificate programmes are available in these universities.

A large number of courses is provided by the open universities for study. The CRTVU in China offers about 149 courses. About 130 courses are available in arts, social sciences. mathematics, science and technology, and education at the UKOU. In addition, science and technology courses such as industry and technology (UA), physics, biology, mechanical engineering, electronics, machine designs, basic and digital computers (CRTVU); music, chemistry and electronics (UKOU), food and nutrition, general science, electrical wiring, child care and development (Allama Iqbal Open University-AIOU); B.Sc. (APOU), are taught. This disproves the general impression that open universities teach only arts and not the science and technology courses. There are examples of excellent science and technology programmes being offered by these universities. In fact, in China, some of the provincial television universities are even contemplating to teach courses in medicine.

It is significant to note that quite a few of the courses provided by the open universities are interdisciplinary in nature. There is a variation in the course system. Some, like the APOU, follow the conventional system and courses have to be studied for a whole year by the students. But several open universities follow the credit system which provides for a large amount of flexibility in their study. The number and size of the credits vary from one institution to the other. A student at the UKOU is required to complete six credits (eight if honours is taken) for a degree programme. On the other hand, several open universities have a large number of credits for an undergraduate programme; 124 credits have to be earned at the UA in Japan and at the IGNOU, it is 96 credits. The credit of the UKOU is much larger in size than the credits of other universities. It is generally felt that the smaller the size of the credit, the greater is the flexibility in the system.

Instructional System

Almost all open universities follow the multi-media approach to education. The multi-media includes the print material, audio-video material and broadcasts. Tutorials are provided at study centres. Print material is considered to be the most important in most of these universities. This is supported by radio and television broadcasts or/and audio and video tapes. In the UKOU, multi-media support to print material is provided in the form of television and radio programmes produced in partnership with the BBC. These are an integral part of most courses and they take around 10 per cent of the students' time on an average. At the UA, during the 15 weeks in each semester, 2-credit courses are broadcast 15 times (one lecture a week of 45 minutes each) and 4-credit courses are broadcast 30 times (two lectures a week of 45 minutes each). Each course is relayed from either radio or television. In China, the TV transmission time for the programme offered by the CRTVU is 33 hours per week. Radio programmes are broadcast by the provincial radio time are provided for relaying Sukhothai Thammathirat Open University (STOU) programmes.

In addition to radio and television relays, provision is made for audio and video cassettes. In countries like the UK, individual students can afford to have audio cassettes and, in some cases video cassettes also, but in some countries like India, these have to be provided at the study centres. Tutorial back-up is an essential ingredient of the open university education system. Where there is a well developed telephone system, as in the UK and Canada, students can use the telephones to contact their tutors. In addition, there is also provision for face-to-face tutorials. Dependence on the face-to-face tutorials increases in countries like India and Pakistan where teachers and students have little access to telephones.

Enrolment

Open universities all over the world have attracted large numbers of students; in some cases the numbers are staggering. In the APOU, there are about 40,000 students; the UKOU has 100,000; the STOU has 400,000; and the CRTVU has a little more than one million and they are aiming at two million by 1990. These numbers are very high by any yardstick and are unthinkable in the conventional university system. Access to such large numbers is made possible mainly because of the distance education system.

Unlike the conventional universities, open universities attract students from diverse backgrounds—working and non-working, the young and old, married and unmarried. At the FU, 77 per cent of the students are males and about 23 per cent are females; about 53 per cent of the students are in the age group of 26-35 and about 23 per cent are less than 25 years of age. About 45 per cent of its students are married.

In the CRTVU, the students comprise workers, cadres and teachers, and science and technology personnel. The profile of the typical student at the UNED is : male, 30 years of age, married, perhaps with two children, middle-aged, employed in public administration or the private sector, whose aim is to achieve a degree in order to increase the possibilities of furthering success in their careers. In the Korea Air and Correspondence University (KACU), 80 per cent of the students are gainfully employed, the largest number 36 per cent are in business, while teachers and government officials are each approximately 20 per cent. All age groups are to be found in the university, but a majority of them (about 63 per cent) are between 26-40 years of age. Students over 41 years constitute about 7 per cent.

There are instances of students over 70 years of age studying some of the courses of universities. From this, it is clear that diverse age groups enrol themselves in the open universities and the motives for their enrolment also vary.

Student Evaluation

Evaluation of the work of the student is of two types: (a) continuous evaluation which involves periodic tests or assignments, and (b) the semester-end or year-end final examination. Generally, weightage is attached to both, but this varies from one university to the other. At the UKOU and the IGNOU, the students' results are declared on the basis of the combined credits. There are no marks or weightage attached to the continuous assessment at the APOU. Only when the students pass guidance by correspondence with their tutors, are permitted to take the examination at the end of the semester by the UA. In this university, the assessment of students is mainly on the basis ot end-of-semester examination.

At the UNED, the evaluation of the students is of two types: (a) at a distance, and (b) twice yearly formal examinations at the study centres.

Students write their assignments about 4 times a year and these are tutor-marked. Formal examinations are held twice a year and in the case of failures one more chance is given. Such examinations take place at the study centres and all the papers are marked by the teaching staff of the academic departments.

An important point to be noted about the evaluation of the students is that it is as rigorous in the open universities as in the conventional system (Ram Reddy, 1986).

More than in the conventional system, the credibility of open universities depends not only on the quality of the educational material they produce but also on the high standards maintained in evaluating their students.

What should be the weightage attached to internal assessment and external examination depends very much on the prevailing educational systems in the countries concerned. The choice of assessment system is normally heavily constrained by the social and national contexts within which a distance education institution operates (Connors, 1981: 175).

Connors argues that there is a very strong case for informal assessment and formal continuous assessment. Some of this assessment should be conducted under controlled conditions if impersonation, etc., is to be guarded against. The result of this assessment should be conflated in such a way as to satisfy both teachers and students (Connors, 1981: 175). Since distance education is still suspect in the eyes of many, high standards in the assessment of students become all the more imperative.

Governance

Open universities in all countries have the same status as the conventional universities in the educational system of the countries concerned. But the requirements of the open universities and the nature of their work are very different from those of the conventional universities. As has been pointed out earlier, they have academic as well as industrial characteristics. The governance of such universities, therefore, has to be such that it promotes the cause of distance education (Ram Reddy, 1986). However, when we look at the governance of these universities, we find that the philosophy of the conventional system has influenced their governance a great deal. In the UKOU, there is the Chancellor, the Vice-Chancellor who is assisted by a Deputy Vice-Chancellor, Pro-Vice-Chancellors and the Deans. The governing bodies are the Council and the Senate. To cater to the special requirements of the open university, there are such units in the University as the Regional Tutorial Service, Institute of Educational Technology, etc. The UA has a President, two Vice-Presidents, Professors, Associate Professors, Visiting Professors, etc. In addition, there is the University of the Air Foundation which has a President and other Directors. The relationship between the University and the University of the Air Foundation is one that is difficult for outsiders to understand. The governance of the UT is almost similar to other universities in Indonesia. The Rector is the head of the university and he is assisted by Assistant Rectors and other senior officers. The same is the case with AU, whose governance is similar to other universities in

Canada. While the IGNOU and APOU are similar to their conventional counterparts in India, in some respects, a few changes have been made. For instance, in both, there is no provision for the Court or Senate.

In organising the universities, one clearly sees the impact of the conventional universities. This is mainly because the planners are accustomed to conventional universities and in the case of open universities they would not like to make bold and unknown experiments in their organisation.

Broadly, there are three types of staff who work in open universities—academic, technical and administrative and supportive staff. The academic staff, again, comprise full-time persons working with the university and a large number of part-time persons. A large number of technical people need to work in the open universities to produce and distribute their courses. Similarly, the requirements of the administrative and supportive staff are very large in the open universities. In the UKOU there are about 3,000 staff members of all types; the CRTVU had about 23,000 people working at all levels, including 11,732 full-time tutors. In addition, there are about 30,000 part-time tutors in this university. In the UA, the full-time faculty consists of 51 Professors and Associate Professors. But it has about 330 part-time lecturers who handle the work at different levels. The tasks to be performed in the open universities are very different from those performed in conventional universities. As a result, the persons working in the open universities need to be oriented and trained in distance education. These universities have to evolve a culture of their own and anyone working in them must follow that culture.

Regional and Local Centres

In organising its work, an open university has to maintain a delicate balance between centralisation and decentralisation. It is said that in a conventional university, it is the teacher who teaches, but in the open universities, it is the institution which teaches. The courses are designed, written, produced and distributed by the university. In all these activities, there is a high degree of centralisation. These universities, however, need to decentralise their student support services by establishing regional centres and study centres. The UKOU has 13 regional centres and about 250 study centres. In China, there is a hierarchy of organisations—at the top there is the

CRTVU, at the provincial level there are the Provincial Radio and Television Universities, and below them there are the branch schools, the working schools and the classes. In Indonesia, there are the regional units. In Spain the UNED has a network of study centres all over the country which have been established through the initiatives of local corporations, public or private agencies. In India, the APOU has set up more than 50 study centres in different parts of the state of Andhra Pradesh and the IGNOU has plans to set up 15 regional centres and 100 study centres all over the country.

Setting up study centres is considered essential in the open university system to provide support to the students. Generally, tutorial support and audio visual media facilities are available at these centres. This is also the place where students have opportunities to meet their fellow students and exchange ideas. Such peer group interaction has great educational value. An interesting feature of the study centres is that they are set up in existing institutions and no separate infrastructure in the form of buildings is created.

Cost-Effectiveness

Educational planners are attracted by the concept of open universities because of their cost-effectiveness. While it is difficult to compare an open university with a conventional university, it is widely believed that the former is less expensive than the latter. Figures are not available for all open universities but here we shall refer to some work that has been done in the UKOU and a few others. The unit cost of the under-graduate programme in the UKOU was £ 1800 per student. It is subject to variation between the extremes of £ 1400 for arts and £ 2340 for sciences per year. This compares favourably with the UGC norms of £ 3510 per student a year or over £ 4700 per year if the student's maintenance grant is included. The student has to pay around 600 to 800 Marks for a full-time course at the FU in West Germany. At the UT, Indonesia, a student pays between Rs. 20,000 and Rs. 35,000 for a semester depending upon the type of course. The cost per student is $ 240 a year in the UNED of Spain. In India, a student pays about Rs. 500 a year for the under-graduate course at the APOU. At the IGNOU, the fee is Rs. 750 for the one-year diploma course in management. In Thailand, calculations show that the average cost per graduate is lower in the STOU than in other universities (Wichit Srisa-in, 1986:31). It is 2341 Baht per student at the STOU whereas at

Mahidol University, it is 1,20,700 Baht, which is considered to be the highest among conventional universities and 11,463 Baht per student at the Thammasat University whose per capita expenditure is considered to be the lowest. The Evaluation Mission from the Overseas Development Administration, U.K. estimates that "taking into account amortisation of capital costs, salaries and other recurrent expenditure together with student numbers, the AIOU (Pakistan) would progressively show considerable cost advantages over other conventional universities." The cost comparison between AIOU and conventional institutions in Pakistan for students in B.A. would reveal that in the former it is less by about 39 per cent (Wichit Srisa-an, 1986). Thus, the general belief that education through open universities is highly cost-effective is fully supported by the empirical data.

While distance education through open universities is cost-effective, it is wrong to think that they do not need considerable investments (Smith, 1986). There are those who are under the impression that open universities can be started without incurring much expenditure and without adequate planning. Both are erroneous assumptions. In fact, open universities need heavy financial investment in the beginning, on buildings, studios, equipment and course production. It is only in the long-run that they will be less expensive than the conventional system. It is also wrong to think that they will be financially self-supporting. They may cost less to the exchequer compared to their conventional counterparts, but rarely would they be on their own. The experience of other open universities reveals that hardly any of them is self-supporting. They are, to a great extent, dependent on the grants provided by the Government. If high quality is to be maintained in the production of their courses, print as well as non-print material, such investments become inescapable. Quality is very much linked with costs.

To conclude: I have described the concept, the need, and the organisational form of the open university (autonomous model of distance education). The origin of distance education lies basically in the philosophy that the society has a responsibility to provide educational opportunities to those who, for some reason or the other, cannot go to the conventional system. In the *Mahabharata*, there is the case of Eklavya who wanted to learn under the guru, Dronacharya, who, as is well known, refused to take him as a student because he was neither a Brahmin nor a Kshatriya.

However, Eklavya was determined to learn and his will and devotion made the *vidya* he sought from his guru accessible to him even though the guru himself was inaccessible. In those days, a Dronacharya could refuse to take an Eklavya as a student and the society would tolerate it. Today's democratic society can neither afford to overlook the interests of the Eklavyas nor tolerate the Dronacharyas. Distance education and the open universities facilitate this; open universities are universities for the modern Eklavyas. Availability of communication technologies make this possible today. It is said that there was a time when, if a student wanted to learn, he had to go to Aristotle. Today, we have the means of bringing Aristotle to the student. It is time that the educational planners take full advantage of the technologies available for extending educational opportunities to all those who want to have access to them. For, open universities are veritably the new temples of learning, responding to new needs.

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2

ATHABASCA UNIVERSITY RESPONDING AND ADAPTING TO CHANGE

TERRENCE R. MORRISON
AND
DIPAK SARASWATI

Introduction

Athabasca University, located in the township of Athabasca in the province of Alberta in Canada, is an open university dedicated to providing access to university education at the undergraduate level of those adult Canadians who cannot avail themselves of opportunities at more traditional universities.

The university has a colourful history that has been well documented by several authors (Hughes, 1980; Shale, 1982; Paul, 1986). The insecurity in its early days, identity crises at various stages of development due to frequent changes of leadership, the quest for credibility and leadership in the world of distance education and the trauma of relocation from the capital of the province, Edmonton, to the small rural community of Athabasca 145 kilometres north of Edmonton are all in the past now. These experiences have enabled the institution to develop a unique characterstic—the ability to respond and adapt to the changing needs and demands of the society it serves. With its ability to respond and adapt to change, Athabasca University is on its way to establishing a new educational tradition. To understand and appreciate the spirit with which the university is moving towards its goal, one needs to start with the history of the university before becoming familiar with its operations and aspirations.

The Early Years

The coming of age of the baby-boom generation, free speech movement in Berkeley and emergence of student power, a sudden consciousness of environment and resources, the Vietnam war and rejection of traditional societal values by the younger generations, had changed the social fabric of the North American continent in the late sixties. This change had its most profound effect on the universities across the country. More and more students were enrolling in universities, mostly in Humanities and Social Sciences, while the traditional fields of sciences and engineering saw a large decline in student population. In Canada, student enrolment was increasing at an unprecedented rate and most provinces were establishing new universities to cope with the increasing number of students. The province of Alberta, with a population of about two million, already had three universities—the University of Alberta at Edmonton, the University of Calgary and the University of Lethbridge. The University of Alberta, the oldest and the largest of the three, was reaching what was considered to be the upper limit of its growth. To ease the pressure on the University of Alberta, the provincial government in its January 1970 white paper on post-secondary educational policy, announced the establishment of a fourth university in the province to be named Athabasca University and located in St. Albert, a suburb of Edmonton. The university, as it will become clear later, never saw the light of day and eventually got to be known as the *first* Athabasca University.

Though the primary purpose of establishing Athabasca Universtiy was to accommodate the greatly increased demand for university place and the overflow of undergraduate students from the University of Alberta, the Order in Council establishing Athabasca University also authorised it *to explore and to institute, if deemed desirable, new procedures in curriculum organisation and instruction at the undergraduate level.* Clearly, even at the beginning stages, the government had expected the new university to look into innovative, if not non-traditional, methods to improve undergraduate education. The early planning for the university started with a small ad hoc committee that included Dr. Tim Byrne and Dr. Sam Smith, later to become the first two presidents of the university.

Two events made the life of the *first* Athabasca University very short even though a substantial amount of money had already been spent in planning academic activities and a campus in St. Albert. First, the ruling Social Credit Party lost the provincial elections in August 1971, after 36 years in power in Alberta. The new Conservative government, led by Peter Lougheed, promptly started evaluating all major projects of the previous government that were still in the planning stages—Athabasca University being one of them. The second, and more important, event was that university enrolments showed a decline in that year and raised certain doubts

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about the justification of establishing a fourth university in the province. The government, within two months of its coming to power, stopped all activities on the physical planning of Athabasca University at St. Alberta. However, the small ad hoc committee was asked to continue with the academic planning of the university, though the government did not provide any assurance about its establishment.

The British Open University, a bold new initiative in higher education, had already started its operation in the UK. Though the success of the open university was yet to be analysed, the concept of providing university level education to the educationally disadvantaged through an open system had drawn the interest of education experts from all over the world. Dr. Byrne, a leading member of the ad hoc planning committee for Athabasca University, persuaded the Lougheed government to start an experiment in Alberta—to establish the first open university in Canada following the model of the British Open University.

Athabasca University was established again in December, 1972, as an experimental institution, by an Order in Council that empowered and authorised the Athabasca University Interim Governing Council to undertake a pilot project for the production, testing and application of learning systems to provide study programmes in the arts and sciences leading to an undergraduate degree, and for the application of technology and new procedures to improve educational opportunities for adults generally.

Thus started the life of Athabasca University, Canada's first open university, from a rented warehouse in north Edmonton with Dr. Byrne as the President. The institution, regarded as a pilot project with about 250 students, was given till November, 1975, to establish that the concept of open distance education could be made to work and that the need for such an institution existed in Alberta. The three years of the pilot project, 1972-75, were characterised by much frenetic activity by a tiny staff of about 35. The university did not have a structure then and role definitions of the staff were, at best, fuzzy. But the staff took on the challenge of believing and proving that an alternative process of university level education—distance education—is a viable, if not necessary, model for the adult students of Alberta. The planning papers that emerged during 1972-75 reveal a strong interest in the non-traditional learner, in home study, in learning theories and their applications to instructional design, in interdisciplinary curricula, and in educational

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S.C.E.R.T., West Bengal
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technology. Many of the dimensions that the university took on in that period characterise it to this day.

The university enrolled its first student in October 1973, in its first course titled *World Ecology: A Scientific Context.* Over the next two years, it developed two more courses and had about 650 students enrolled in the three courses.

At the end of 1975, when the pilot project ended, the government was convinced that the need for such an institution existed in Alberta and an Order in Council gave Athabasca a permanent status. But the legislative commitment was not made till April 1978, when, finally, Athabasca University was established as the fourth permanent university of the province under the authorities of the Universities Act.

The Interim Governing Council was replaced by a permanent Governing Council and the insecurity that had haunted the institution from its inception became a thing of the past. With a new President, Dr. Sam Smith, who had been a participant in the planning of the *first* Athabasca University in 1970, and an expanded staff, the university started out on its mission of providing access to undergraduate education to those adult Albertans who, either by choice or because of circumstances, did not, or could not, take advantage of the traditional university system. A systematic structure, that was absent during the pilot project days, was established and the organisation was divided into two major divisions—Learning Services and University Services—each headed by a Vice President. The disciplinary areas were grouped under two academic units, Liberal Studies and Administrative Studies, with a Director heading each unit. While the number of course offerings increased from 17 in 1977-78 to 29 in 1978-79, course enrolment saw a phenomenal increase from 1,824 to 3,884.

Though the university was given a permanent status, the government was silent about a permanent location for the university that was operating from three rented buildings in Edmonton. The Conservative government was following a policy of decentralisation and the expectation was that Athabasca University would be given a permanent site in one of the smaller communities around the capital city. A number of smaller communities had been approaching the government and the university with submissions elaborating the suitability of their individual communities as the home of the new institution. The university, meanwhile, had prepared a document stating that along with other factors, university autonomy, proximity to centres of communication and printing and accessibility to the University of Alberta for its library and computing facilities, should have primary influence in the selection of the future home of Athabasca University. Essentially, a location near Edmonton was the basic assumption of the document.

But that was not to be. In March 1980, the Minister of Post Secondary education surprised everyone with the announcement that Athabasca University would be relocated in Athabasca, a tiny hamlet of 1,800 people situated 145 kilometres north of Edmonton.

For most of the staff, relocation to the town of Athabasca came as an unexpected shock. The university, afraid that a large number of staff members would leave the institution, asked the Committee of Relocation of Athabasca University to operationalise a smooth relocation procedure that would minimise the trauma of relocation and provided several incentives to the staff members to relocate in the town of Athabasca. Still, 48 per cent of the professional staff and 58 per cent of the support staff left the university by the time relocation was completed. The university completed its relocation move in September 1984, to the new campus with excellent facilities. Athabasca University, Canada's unique open university, now secure with permanent facilities in the town of Athabasca holds the distinction of being the most northerly located university in Canada.

The University Mission

Both relocation and a sense of permanency set in motion a process of planning within Athabasca University, one outcome of which was the articulation of the clear mission statement for the university. Approved in May 1985, the mission of Athabasca University is both wide-ranging and unique among Canadian universities. The core element of the mission of AU is captured in the following statement of principle:

> *Athabasca University is dedicated to the removal of barriers that traditionally restrict access to and success in university level studies, and to increasing educational opportunity for all adult Canadians regardless of their geographical location and prior academic credentials. In common with all universities, Athabasca is committed to excellence in teaching, research and scholarship, and to being of service to the general public.*

Athabasca University's distinctive mission of improving accessibility, equality of opportunity and success for adult Canadians by removing barriers that traditionally restrict access to university-level studies is fulfilled through a number of strategies described below:

- a commitment to an admissions policy which dictates that the only entrance requirements to the university are that students be 18 years of age or older and residents of Canada;
- a specialisation in techniques of delivery and teaching that minimises for students the constraints of time and place of study;
- a commitment to credit coordination, allowing students to assemble credit earned at other institutions towards credentials at Athabasca University;
- the provision of special tutorial, counselling, and other support services that facilitate students' learning;
- the development of programmes in the light of identifiable needs of prospective students, including members of disadvantaged groups;
- a commitment to collaborative arrangements with other institutions with a view to improving the facilities and opportunities available to students;
- a commitment to continuous review of course content and delivery mechanisms and their effectiveness;
- a commitment to identify elements of programme that may be better delivered and supported by the utilisation of innovative pedagogy and appropriate education technologies;
- a commitment to the active search for adequate funding necessary for the realisation of longer term objectives.

Currently, Athabasca University is involved in a major strategic planning process relative to its mandate and mission. Using a multiple strategy approach, Athabasca University intends to broaden and expand its functions and services. Among the initiatives being planned for implementation are the development of a Bachelor of Science degree, Master Programme in Business and Public Administration, a new continuing education programme focused on individual life-long learning needs and retraining requirements of industry; establishment of a Centre for Research in Distance Education to develop new forms of technologically mediated instruction and programme delivery, and pan-national collaborative ventures in course development and marketing.

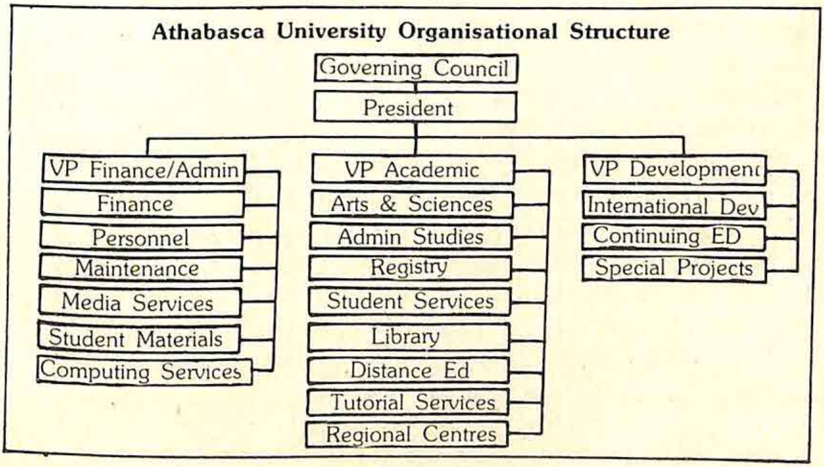
Governance and Administration

The university has adopted a unicameral system of governance with a 23-member Athabasca University Governing Council, composed of the university executive officers, elected members from the faculty, staff, tutors and the student body, and public members appointed by the government, serving the tripartite role of the Board, the Senate, and the General Faculties Council. The Chairman of the Governing Council, who is also the Chancellor of the university, is appointed by the government.

The President is the chief executive officer and Vice Chancellor of the university and reports to the Governing Council. The overall operation of the university is now divided into three functional areas—Academic, Finance and Administration, and Development. Each of these functional areas is headed by a Vice President reporting to the President. The organisational structure of the university is shown in the diagram.

The university, when awarded permanent status, had chosen a unicameral system of governance with the belief that such a system would be able to respond to changing needs much quicker than the traditional bicameral system. As a result, the governance system was extremely centralised. Serious attempts have been made, starting in 1981, to develop a stronger Academic Council and its various standing committees for developing academic policies though the Governing Council still holds the final authority for academic as well as budgetary matters. One expects that with time a governance system would evolve within the unicameral system that would reflect most of the characteristics of a bicameral system.

Figure 2.1



The two primary academic functions of the university—course production and programme services delivery—cut across the organisational lines and several organisational structures have been tried over the years to accommodate these two academic functions. The present organisational structure, with a new Vice President in charge of Development, was put in place in 1986 and is substantially different from the one set up when the university was given its permanent status.

Faculty and Staff

The role of the traditional academics was considerably downplaced in the original concept of Athabasca University. The institution, in its search for an identity as a non-traditional institution, had decided against having a permanent faculty of its own. The policy at the time was that the university would hire a minimum number of academics, to be called Senior Tutors and Tutors, whose primary responsibilities would be to design programmes and identify courses to be developed. The main body of the permanent staff would be made up of instructional designers, visual designers and editors and the instructional designers were perceived as the most important personnel in designing and developing the Athabasca University distance education system. For the academic work involved in producing courses the university would contract outside academics well known in their fields to write the distance education courses in collaboration with the instructional designers, visual designers and editors of the university.

The policy was legitimated with the slogan that the Athabasca faculty spanned the world, since reputed academics from all corners of the world were to be chosen for writing Athabasca courses. But operational difficulties developed none too soon. Some established academics from other institutions declined to write Athabasca courses because of commitments in their own institutions. Of these who agreed to write Athabasca courses, a large number often failed to meet the deadlines. And for quite a few outside authors, the concept of distance was foreign and the course materials they wrote were not acceptable to the institution. The university realised that it had to have a reasonable number of academics on its staff to write and produce courses.

Having attained a permanent status, the university started appointing academics in various disciplines to accelerate course production and minimise its dependence on outside academics. It soon became apparent to the new academics that the university was not planning to have a permanent faculty. The university was developing a policy to appoint academics on a contract basis to write specific courses and then release them after the courses were ready. The only staff the university intended to retain on a permanent basis were the instructional designers, visual designers and editors. This caused a mini-rebellion by the academics that resulted in the formation of the Athabasca University Faculty Association. The university finally agreed to a permanent faculty. Still, so great was the obsession of being non-traditional that the academics were not entitled to the traditional university titles of Professors, Associate Professors and Assistant Professors. Instead, faculty members were given the titles of Coordinators and were ranked as full Professor *equivalent*, Associate Professor *equivalent* and Assistant Professor *equivalent*.

With time, the importance of the instructional designers as the dominant unit at the university started decreasing. It became apparent to the university that academics learned the techniques of instructional design quite readily after writing one or two courses with the assistance of instructional designers. The present policy of the university, therefore, allows more experienced academics to write and produce courses with minimal involvement of instructional designers. However, all new faculty members are required to work with an instructional designer for the first few courses they write.

A number of organisational changes were implemented between 1980 and 1983 to break down what was perceived to be an artificial separation among those responsible for course development (instructional designers and editors), course delivery (regional and tutorial services) and the overall academic programme (the academics). These three units were eliminated as individual entities and absorbed in the two academic units—Liberal Studies and Administrative Studies with a Director heading each academic unit. The year 1986 saw another big change towards traditional university structure. The academic units were named as faculties, the designations of the Directors were changed to Deans and the academics were, finally, accorded the titles of Professors, Associate Professors and Assistant Professors.

Currently, the staff members of Athabasca University are divided into three categories: Academic, Professional and Support. The academic staff of the university are divided into two faculties—the

Faculty of Arts and Sciences and the *Faculty of Administrative Studies;* each of the faculties is headed by a Dean. The instructional designers and editors, though absorbed in the two faculties, retain their original titles within the faculties. Other professional staff, such as Visual Designers, Librarians, Registrars, Counsellors in Student Services, etc., enjoy certain faculty privileges such as research and study leave and professional development leave. The total number of academics and professionals at Athabasca University is about eighty and the support staff numbers about two hundred.

In keeping with the mission of the university, Athabasca University

- endeavours to recruit to its academic staff persons of demonstrable disciplinary command, of personal commitment to learning and professional activities, of enthusiasm for the university's approach to education, and of demonstrated scholarly achievement or promise;
- provides all staff with opportunities and resources to maintain their disciplinary command and professional activities;
- regards research, teaching, and scholarly and professional activities as vital responsibilities of members of the university's academic staff, and appropriately recognises and rewards achievements in these activities;
- maintains a policy of regular periodic evaluation of its academic staff and teaching methods so as to maximise the effectiveness and vitality of its academic programmes.

The responsibilities of the academics include course writing and course production, coordination of course delivery, disciplinary and institutional research and university committee work. Other professionals such as visual designers, instructional designers, editors, computer experts and counsellors also play prominent roles in certain aspects of course development and course delivery. The rest of the professional staff are employed in the administrative functions of the university.

Academic Programmes

The Faculty of Arts and Sciences offers courses in languages, history, philosophy, social sciences, women's studies, labour studies, native studies, physical and life sciences, environmental sciences, mathematics and computer science. The Faculty of

Administrative Studies offers courses in accounting, organisational theory and behaviour, quantitative methods, industrial relations, legal relations, public administration, and marketing. The university also offers transfer courses in a number of disciplines and has a series of cooperative programmes in such areas as nursing, social work and special education.

The courses themselves are differentiated into three levels. The preparatory courses, commonly called 100 level courses, are designed to prepare students to university level study. The introductory level courses, designated as 200 level, are termed as junior courses. Finally, the senior level courses, at 300 and 400 level, are those that require or assume some appropriate prior knowledge and, therefore, may require specific prerequisites. Athabasca University courses are designed either as three credits or six credits in weight and correspond to three and six semester-hours of credit designations used by other Canadian universities. Students are allowed six months from the start date to complete a 3-credit course and twelve months for a 6-credit course. To complete an undergraduate degree, a student is required to successfully complete 90 credits.

Athabasca University provides two types of programme: individualised study programme and university determined programme. The individualised study programme provides a framework within which students can plan and implement programmes, in consultation with a student advisor, to suit their needs and interests and complete a Bachelor of General Studies (B.G.S.) degree either in Administrative Studies or in Arts and Sciences. A special feature of the programme is credit coordination that allows academic work completed at other institutions to be counted towards the B.G.S. degree.

The university determined programme in Administrative Studies is designed to meet the needs of people interested in furthering their education in the field of management. Three areas of concentration are currently available: public administration, accounting, and general administration leading to the degree of Bachelor of Administration (B. Admin).

In the Arts and Sciences faculty, the university determined programme permits students to pursue a course of study, leading to a Bachelor of Arts (B.A.) degree in the broad areas of humanities, physical sciences and social sciences, with indepth study through concentrations.

Course Planning & Development Model

Athabasca University produces home-study courses in three models—the *ground-up* the *wrap-around* model and *reading course* model. The ground-up model are those courses that are written and produced in their totality by a course team. In the wrap-around model, a course is developed with a suitable textbook as the core instructional material with the course team writing and producing elaborate workbooks to guide the student through the text. Reading courses, designed for senior level courses, are based almost exclusively on assigned texts and are characterised by minimal guidance in the form of workbooks and increased tutorial support.

Figure 2.2

Course Design and Development Model for Athabasca University Principal Operating Steps

Phase 1 : Long Range Institutional Planning

- Identify potential new programmes, services and priorities
- Affirm or withdraw current programmes and services

Phase II : Programme Planning

- Detailed programme outlines
- Recommendations on programme implementation and resource allocation

Phase III : Course Design

- Detailed course blueprint including content outline, objectives, delivery plan, development schedules, resource requirements, evaluation plan and sample unit

Phase IV : Course Development

- Final drafts of instructional units, examinations, course evaluation materials, tutor manuals, media materials, etc.

Phase V : Course Materials Production

- Production of course material
- Stockpiling of course material

The course design and development process at Athabasca University encompasses various levels of linked activities—from long term planning to detailed course evaluation and revision. The first five phases of the Course Design and Development Model are shown in the diagram above. While the model appears linear, data at each stage feeds back to other stages and phases.

Once the first five phases are completed, the next phase, Phase VI: Course Delivery to the students, begins. Continuous evaluation of the course material is an essential feature associated with course delivery. In Phase VII, the data from the evaluation is analysed and decisions are taken on revision and rewriting of the material in Phase VIII.

The main activities of the academics and other professionals at Athabasca centre around course design and development (Phase III to V) and course delivery (Phase VI). These are described below in detail.

Course Design and Production

Preparation of distance education courses and materials is a complex task requiring input from a variety of academic and professional experts. Curriculum and evaluation specialists are involved in long-term programme planning; academic experts are involved in established detailed course content outlines, learning goals and student evaluation; instructional designers explore, with academic experts, alternative teaching/learning strategies; editors and media specialists address problems in communication and display; academic and project managers oversee and coordinate the participation of specialists in the process. The complexity of the task is evident in the ecological model of course design, shown on the next page, that identifies the major participants in and advisors to, the course development process.

Athabasca University works with a course team concept for its course production. In general, the membership of the course team consists of a Subject Matter Expert (SME) who also serves as the course author in most cases, an Instructional Designer (ID), a Visual Designer (VD) and an Editor, one of whom also takes on the added responsibility of the Course Manager. Once Institutional Planning (Phase I) and Programme Planning (Phase II) processes are completed, an appropriate course team is set up whose first task is to produce a detailed Phase III analysis. It is at this stage that a course proposal is formalised and circulated widely for comment and feedback. The analysis is required to contain

- General Course Information
- Course Model
- Content Outline
- Instructional Goals
- List of Course Components
- Proposed Instructional Strategies
- Project Management and Course Evaluation
- Resource Requirement, Cost Analysis
- Sample Unit Outline or Prototype Unit
- Special Project Features

Although approval to proceed with the course development rests with the Dean of the particular faculty, the course proposal is normally reviewed widely within the institution both from the point of view of the programme (or programmes) to which the course is related and in terms of resource implications the project may have, for various departments during development, production and delivery. The crucial component in the Phase III analysis is the Sample Unit which is the best indicator of what kind of final product may be expected.

Once the Phase III analysis has been approved by the Dean, with modifications suggested in the university-wide review, the process moves into Phase IV: Course Development.

The academic subject matter expert for a course development project is responsible, through the course manager, to the Dean to ensure that the course content, learning goals and student assessment criteria are appropriate to student needs, to programme requirements at the universities level, and to the academic standards of the discipline(s) which the course addresses.

The instructional designers are professional educators who specialise in areas such as curriculum development, instructional psychology, instructional systems design or educational technologies. They are principally concerned with teaching/learning processes, from both theoretical and applied perspectives, the information resources, the learning environment, and the various interactions required by the teaching/learning processess.

The course team responsibilities of instructional designers may vary from occasional consultant to fully integrated participant in the course design and development process. Subsequently, instructional designers may be actively involved in course evaluation and course revision activities.

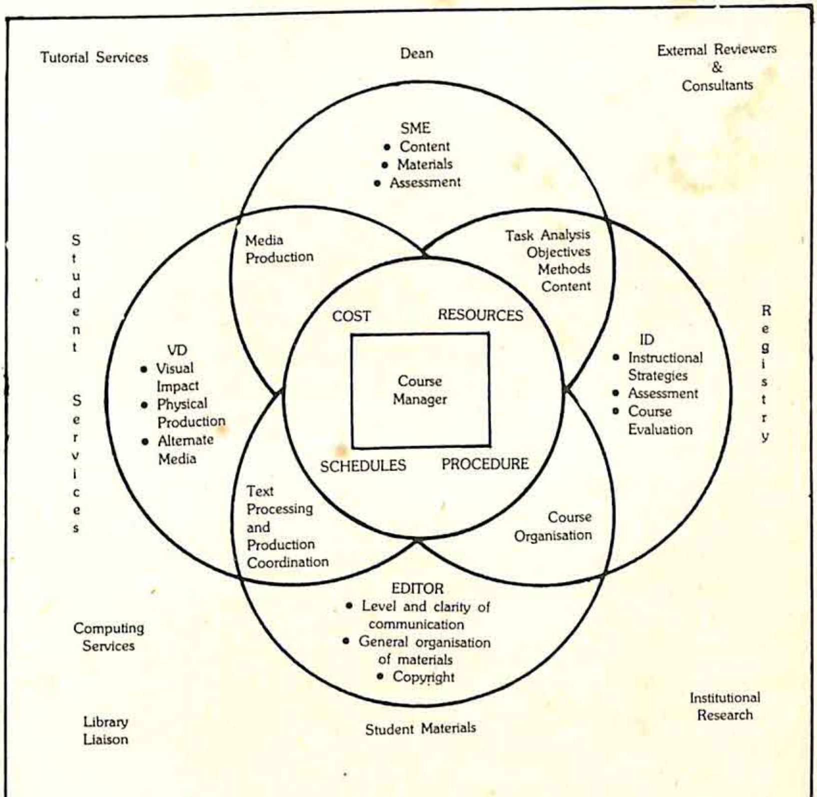


Figure 2.3

Ecological Model of Course Development at Athabasca

The role of the visual designer is to ensure that all visual materials, whether originating inhouse or acquired from outside, are of the highest possible visual quality. As a member of the course team, the visual designer is responsible for the visual interpretation of the concepts and materials presented through the design and integration of graphics, illustrations, photographs, layout and typography. The visual designer is also responsible for the final production of the learning materials package.

The principal responsibility of the editor in the course team is to improve the instructional effectiveness of course materials by ensuring that they are coherent, intelligible, accurate and effective in communicating factual, conceptual and attitudinal information. The editor also ensures that the course materials conform to the publication style and standards adopted by Athabasca University and that all necessary copyright clearances have been obtained.

In producing the course material, the course team also accepts input from other sources such as external academic consultants, Institutional Studies Unit, Registry, Library, Student Service, Tutorial Services, Student Materials Unit.

When the final manuscripts, with texts and graphics, are completed by the course team, the visual designer finalises the page layout and typography and proceeds with the final printing. The course material is typeset through the mainframe computer and camera-ready output from a laser printer is used by the press for printing. With the recent advances in Desk Top publishing techniques, several course teams are preparing camera-ready copies of course material using Macintosh and IBM microcomputers and Apple Laserprinters, a technique that seems particularly suitable for low enrolment courses and reading courses. The audiocassette component is produced by the Media Services and the video component is produced with the assistance of ACCESS Television, the educational television facilities for production and broadcast in Alberta. When the course packages are ready, they are stockpiled in the Student Materials Unit from where they are distributed to students, regional centres and learning centres.

Course Delivery

Once the course package is ready, an academic takes on the responsibility of coordinating the delivery of a course with the help of the Tutorial Services Unit. With the home-study course package serving as the learning material, the University offers three distinct modes of course delivery—home study, teleconferencing and seminar-support. Though a majority of the students are enrolled in the home-study mode of delivery, the popularity of paced enhanced delivery (PED) through teleconferencing and seminar-supported mode is increasing among rural students.

In the home-study programme, once a student enrols in a course, he/she is automatically assigned a telephone tutor who becomes the main contact between the student and the University. The student receives a personal letter from the tutor with the course package in which the tutor introduces himself or herself and provides brief information on the course in general and the administrative procedures regarding assessment and examinations. Before the start date of the student, the tutor makes an introductory call to the student and talks in general about the course and helps the student in preparing a study schedule if the student so wishes. The student is encouraged to call the tutor on tutor nights, a specified block of three hours one evening a week. The tutor helps the student with course content, grades the assignments and sends them back with comments of feedback, advises him on examinations and other procedural matters and stays with the student till he/she completes the course. All students have toll-free telephone access to tutors from anywhere in Canada.

Tutors are part-time members of the staff recruited from throughout the province of Alberta by the Tutorial Services Unit in consultation with the course coordinator. Most of the tutors have a Master's degree and a large number of them also hold doctorates. Typically, Athabasca tutors are full-time teachers at other teaching institutions or are working in the field. Because of their direct involvement in the teaching/learning process, tutors play a key role in the course revision and modifications to various services to the students. Tutor representatives, elected by the Athabasca University Tutors' Association, have memberships in all decision making bodies of the university, from the Governing Council to the Academic Council to the Faculty Council.

The emphasis of the university has always been on the home-study mode of delivery. The teleconferencing mode and the seminar-support mode of delivery, based on the home-study course packages, have been instituted mainly due to demands by students from rural areas. Unlike the home-study mode, where a student has control and autonomy over the learning environment and pacing, these two modes of delivery, termed *paced enhanced delivery* (PED), do not allow students to set their own pace. Instead, students follow a schedule, set up by the institution, where they meet collectively once a week or once every two weeks, depending on the way the schedule is set up and go through the course material in an environment that resembles the traditional classroom-lecture system. In the teleconference mode, several centres in rural areas are hooked up by Athabasca University's own bridge to a main centre with an instructor. Two-way audio channels allow students from the various centres to interact with the instructor directly as well as between themselves. From 1987, Athabasca will add a telewriter system, an electronic blackboard, in the teleconference mode that would allow the instructor the advantages of a blackboard. Whatever the instructor would write or draw on an electronic pad would be transmitted to television sets placed in each of the centres.

In the seminar support mode of delivery, an instructor conducts a course in a classroom in a rural area with face-to-face interaction. In this mode of delivery, Athabasca University works with the five Educational Consortia established in the province by the government. If a group of twelve students or more request a course in the seminar support mode, the local Educational Consortium arranges with Athabasca University to have the course delivered through an instructor. The responsibility of the consortium includes arrangement of a meeting place—a classroom of some sort, appointment of a suitable instructor with the approval of the coordinator of the particular course, registration of the students, schedules of sessions, assignments and examinations, and communication with the various units of the university.

A recent study (Shobe, 1983) indicated that rural students overwhelmingly prefer 'classroom based' courses over 'teleconferenced' courses with 'home-study' being the last choice while the urban students seem to prefer the home-study mode. Approximately, 10 per cent of the 12,000 plus course enrolments in 1984-85 were in seminar-support or teleconferenced mode and the percentage of students preferring the PED over the home-study mode is moving upwards every year. The emphasis of the university is, thus, shifting from distance education to access to education through an appropriate mode of delivery.

Student Assessment and Examinations

Students at Athabasca are assessed and given a percentage grade in a course on the basis of their performances in a set of assignments/essays and examinations. The number of assignments/essays in a course and their total weight in the final grade for the course are determined at the time of course design. University regulations dictate that a three credit course should not have more than two examinations while a six credit course can have three examinations at most. Depending on the discipline and level, some courses have only one final examination.

The university had adopted the *Mastery Model* instructional programme during its pilot project days—a natural outcome of the spirit of educational egalitarianism prevailing at that time and the university's concern with educational innovation. The model assumes that most people can attain academic mastery of a subject if they are provided with adequate instruction and sufficient time. Successful implementation of the model required extensive course design based on behavioural objectives, continuous diagnostic evaluation of learning throughout the course and provision of additional instructional opportunities and time for those who needed it. The pass mark, using a criterion-based assessment process, in a course was set at 80 per cent indicating that the student had to master 80 per cent of what was to be learned in a course to get credits for the course. But operational problems, with some students taking more than two years to complete a three credit course, soon forced the university to make a major alteration to the model—set up time limits of six and twelve months for completion of three and six credit courses respectively. The other attributes of the model, related to course design and continuous assessment, are still retained. The passing grade has been changed to 60 per cent from 80 per cent as the university considers that a better than marginal performance deserves a passing grade.

Though the university has set an upper limit to the time by which a student must complete a course, it has not set any lower limit. Thus, an industrious student can complete a course in three months, instead of in six or twelve, if he/she chooses and is able to do so.

The system allows a student to write an examination whenever he/she feels prepared, after completing the required assignments/essays in a satisfactory fashion. If the student lives near a regional centre or a learning centre, the examination is scheduled at the centre at a time convenient for the student. Otherwise, the student approaches the local school or library for examination arrangements with a suitable invigilator acceptable to the university. The Registry sends the examination to the invigilator whose responsibility is to conduct the examination and then send the examination back to the Registry. Though tutors grade and mark assignments/essays, all examinations in a course are marked by a central marker to ensure uniform assessment.

Regional Centres and Learning Centres

In keeping with the mission statement, and in response to the increasing demand for access to education from all parts of Alberta, the university has set up 3 regional centres and more than 60 learning centres in the province. The regional centres at Edmonton, Calgary and Fort McMurray have jurisdictions over central, southern and northern Alberta respectively. The university rents facilities in these three urban centres where students can enrol in a course personally, pick up the course packages if the course happens to be a popular one, get counselling on academic, personal and financial matters, write exams and have access to supplementary materials, audio and video facilities and computer laboratories. The regional centres also have teleconferencing facilities and are responsible for arranging teleconferenced and seminar supported deliveries of courses within their jurisdiction.

Learning centres in the rural areas are usually located in the local schools or colleges accessible to students on certain days in a week. These also contain supplementary study materials and audio and video facilities but the facilities for students at the learning centres are not as elaborate as those in the regional centres.

Student Support System

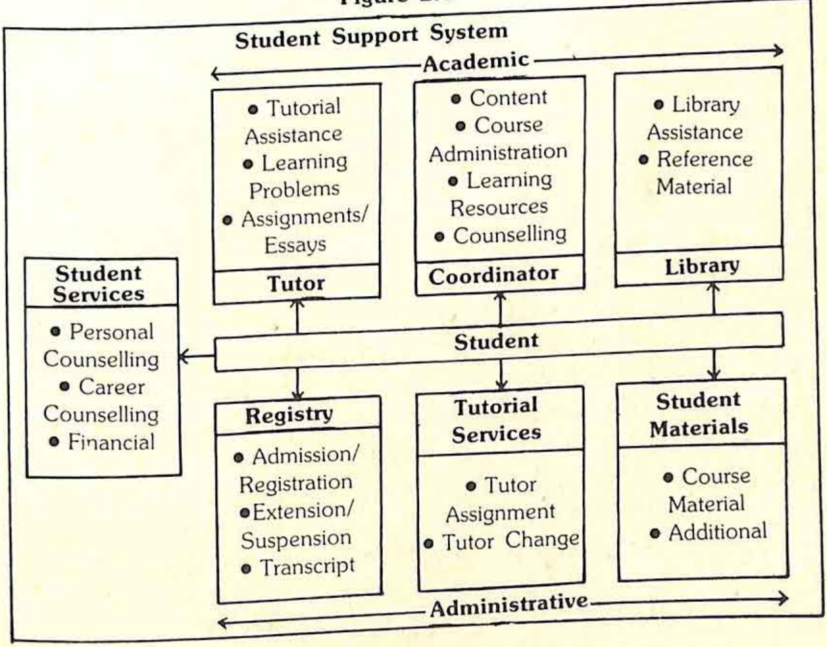
In providing access to education, Athabasca has always been concerned with the success of its students at the university level and has developed and instituted an elaborate student support system (McInnis-Rankin and Brindley, 1986) that distinguishes the university from many of the other open universities around the world.

The goal for many of the distance open universities is to make the learner as independent as possible. Such institutions place much emphasis on developing learning packages that would allow the students to work on their own with minimal contact with the institution. The emerging body of research, however, indicates that the assumption that adult learners could be largely self-sufficient may not be correct. For the majority of the adult learners, the concept of open distance learning is a totally new experience and a large proportion of them lack the ability to adapt readily to such a system (Coldeway, 1982). In most cases, adult students are studying part-time and have to accommodate their studies within the demands of their families, jobs and established social life. Their role as a student is one of the many other roles—parent, employee, conscientious citizen, friend, etc. To complicate matters further, most adult students have been away from any kind of educational environment for at least a few years, so that their study habits, if not non-existent, are, at least, rusty. Coming into a distance education system, a system so new that the student never had a chance to become familiar with, the potential for conflict between the demands of their studies and those in other areas of their lives is great. The objective behind setting up the student support system is to minimise the potentials for conflict and help the student to proceed with the academic work in a systematic way to achieve success.

The student body at Athabasca is a totally nonhomogeneous group in terms of educational background, sex, age, profession and income. Not all of them require an elaborate student support system, but many do. The diagram below shows the academic and administrative support available to students at Athabasca.

A typical Athabasca student first approaches the Student Services for personal advising and counselling. Advising, which is more prevalent in distance education institutions, is more problem-centred than person-centred. Advisers provide information about relevant courses and programmes and direct to them appropriate programmes and courses after analysing the needs and the goals of the students. They also help students in designing study strategies regarding time management, reading and study techniques and approaches to writing different types of examinations.

Figure 2.4



Recently the University Student Services has designed self-tests in mathematical and language skills for those students who have self-doubts about their abilities to pursue university level education. These tests are not compulsory and do not have any effect on the admissibility of a student to the university. However, students are advised that the results of these tests do reflect the chances of success of a student at the university level.

Counselling, on the other hand, is person-centred and distance education institutions have been slow in recognising the worth of counselling in the distance education setting. Adult learners face a myriad of personal and social problems in returning to an educational environment, including role conflicts, financial pressures, learning difficulties and confusion about their goals. The counsellor's role is to help the students assess their situation and alternatives and to teach decision making and goal planning skills.

Student Services also assists and advises students on the availability of student loans, scholarships, bursaries, etc., and on other financial matters.

The student, having received a certain amount of guidance regarding courses and programmes from the Student Services, then registers in one or more courses at the university. Athabasca follows a continuous enrolment system and a student can enter a course at any time of the year with a start date on the first of the month following registration. A student is allowed 6 months from the start date to complete a 3-credit course and 12 months to complete a 6-credit course. Students are also allowed one suspension for a specific period in a course if circumstances demand it; students can also get an extension over the prescribed time, for a nominal fee, if they are unable to complete the course within the allotted time period. The Registry handles all requests for such suspensions and extensions. The Registry also handles all examination requests from students and arranges examinations for students at the study centres, regional centres or in the community where the student resides and issues the transcripts of students' performances.

The Tutorial Services Unit has the responsibility of assigning individual tutors to a student for each of the courses. Occasionally, for one reason or another, a student might want to change tutors and Tutorial Services looks after such needs of the students.

The Students Materials Unit, apart from being responsible for course materials, also sends supplementary materials that students may request after consultation with the tutor and/or the course coordinator.

On the academic support side, the main lifeline of the student to the university is the tutor. The tutor helps the student with the course content and the learning problems that the student may have, corrects the assignments/essays that the student submits and also makes the student aware of the administrative procedures. The coordinator of the course is also available to the student for help with content matter and other course related matters. The Library, an esential part of the undergraduate education process, has been so designed that the student can borrow books from the library by phone, ask for resource materials, get help in research and also get interlibrary loans.

Students are encouraged to take advantage of the support system to the fullest and all units of the university pay prompt attention to students' inquiries and requests for assistance.

Athabasca University Students

A recent survey by the Office of Institutional Studies, now merged with the new Centre for Research in Distance Education, provides a broad picture of Athabasca University students that has helped the university in determining and planning its future course of action.

The average age of Athabasca students is 32 years while the average age of Athabasca graduates is 39. A distinctive feature of Athabasca University is that 61 per cent of its students are women. No other Canadian institution of higher education has such a high proportion of women students. The same figure also holds for Athabasca University graduates.

Less than 50 per cent of Athabasca students had prior university level studies experience. But more than 75 per cent of the graduates of Athabasca had at least some university level education. One could possibly draw the conclusion that those with some prior university level education found it easier to cope with the distance education mode of studies. Categorising the graduates with prior university level education as *experienced* graduates, the study found that 87 per cent of the experienced graduates were married and 78 per cent of them had children at home while studying at Athabasca. Eighty-two per cent of the experienced graduates were employed while studying at Athabasca and 59 per cent were employed full-time throughout their duration of studies.

These figures provide a general profile of Athabasca students and graduates. The most revealing finding of the survey, collated from the personal comments of the students about their experiences of re-entering an educational environment at a time when they had thought that they would never have any opportunity to pursue university level education without totally sacrificing their livelihood and family life, was the maintaining motivation while meeting various demands of adult and family life seemed to be the greatest challenge of all and 70 per cent of the experienced graduates considered the support of their family and friends to be an extremely important factor, especially for women, in achieving success. This finding, *the importance of the support from family and friends in achieving success*, has not been taken into consideration in the designing of distance education system till now. Athabasca University expects this finding to have serious implications in its future planning.

Emerging Implications

Much of the writing in distance education, particularly the theoretical models, tends to assume that the main problematique in the field rests with the organisation and production of course materials. Undoubtedly, this is an important ingredient of the process and Athabasca University follows an elaborate set-up in the area of course design and course production. The study of Athabasca graduates and the growing experience at Athabasca, however, suggest that a much broader conception of the process is required. The conditions of learning for distance students are not confined to course materials and instructional support only. The social and cultural context in which the learning materials are accessed, interpreted and used are of equal, if not of greater importance and distance education must be seen as a social as well as an instructional process. This suggests a new model of distance learning that treats the variations in the social contexts of independent learning as a critical factor. The experience of Athabasca University suggests that the very concept of distance learning being independent learning is a myth. The reality is that distance learning is interdependent learning, rooted not only in the course materials and instructional support but also in the social and cultural environment of the learner. Athabasca University hopes to design and test a number of approaches to distance education based on the theory of interdependent learning during the next five years.

Among distance educators, far too often, rationales for new ideas or, indeed, defences for the very existence of distance education, are coloured by the bipolar concepts of traditional and non-traditional education. It is not uncommon to find that many people define distance education as *non-traditional*, follow this definition with the assertion that things non-traditional are of more value than the traditional and argue that if an idea in distance education can be shown to be non-traditional, then it must be supported. This line of reasoning leads on inevitably to the conclusion that the role of distance education is a negative one—to be that which traditional education is not. Even if one were to accept this line of argument and pursue it vigorously, one would not have the concept of what distance education is. If there is a trap in distance education, it is to be overly engaged in applying false dualisms to the endeavour.

Distance education is truly paradoxical in that it is based upon the assumption that the long-standing variables of educational background, time and space need not be barriers to learning. Distance education is also a traditional concept, since it assumes that ultimately the individual person will determine what will be learned and how it will be learned.

The bridge that unites these two dimensions of the paradox of distance education is, as all things of value in life, expressed as an article of faith: if one can remove artificial barriers to learning, then one can, indeed, *trust the learner*. Distance education, then, is an enterprise dedicated to the reaffirmation of the importance and value of the person. It is, in this sense, best seen as a new educational tradition in the making.

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3

CURRENT EDUCATIONAL REFORMS IN CHINA: WITH SPECIAL REFERENCE TO CENTRAL RADIO AND TELEVISION UNIVERSITY

MANORANJAN MOHANTY

Education ranks high in the current wave of structural reforms in China. After the national conference on education formulated the proposals and the Central Committee of the Communist Party of China finalised them in May 1985 the reforms have gradually unfolded affecting the entire educational process. The objective of the change is to orient the educational system towards serving the current model of socio-economic development while making up for the disruption of formal education during the cultural revolution.

Education as a high priority

When the four-modernisations line was proclaimed by the Third Plenum of the C.P.C. in December 1978, and the new development model charted out, education was not identified as a priority. It was subsumed under the modernisation of science and technology. But the policy on intellectuals who were despised during the cultural revolution and the Party's frequent reliance on them to debate alternative policies on various questions indicated the new leadership's positive attitude towards education. Piecemeal reforms have taken place during the last six years, like introduction of the national college entrance examination, expansion of adult education and distance education programmes, separation and development of the Chinese Academy of Social Sciences and exchange of students and scholars with foreign countries. It was only when the Sixth National People's Congress in its session in 1984 discussed the serious problems in education and called for drastic changes that the leadership began a series of consultations on this issue.

The national education conference which met from May 15 to 20 was convened by the C.P.C. Central Committee and was attended by educational workers and experts from all over the country. Deng Xiaoping addressing the conference gave the lofty goal of China joining the ranks of the developed countries at the first centenary of the People's Republic in 2049 and identified education as a key factor in accomplishing that goal. According to him, education was as important as economic work. He said, "Leaders who neglect education are immature leaders, lacking the long view and, therefore, incapable of leading the modernisation programme." Hu Qili, who is widely believed to be coming up as Hu Yaobang's successor as the Party General Secretary, struck the same note. The new seriousness about educational reforms was reiterated by Premier Zhao Ziyang who moved the proposal on China's Seventh Five-Year Plan at the Special Conference of the C.P.C. According to the document: "Economic construction, social development and scientific and technological progress all depend on the intellectual development of the Chinese nation, an increased number of trained personnel and further growth of education based on economic development. During the period of the Plan we must attach as much importance to education as we do to economic development and orienting our work to the needs of modernisation, the world and the future, strive to bring about a new situation in education." Thus, currently, educational reform has been ranked with science, agriculture, energy and communications as a top priority development project.

Problems and Objectives

Recent diagnosis of Chinese education has identified several major problems. They are: the weak elementary education, shortage of schools, paucity of qualified teachers, outdated textbooks, low level of vocational and technical education, compartmentalisation and overspecialisation. At the same time, centralised control by the Government departments over schools and universities has inhibited innovative development of education in China. During the past, scarcity of funds for education has been a serious problem as well. What is even more problematic is the fact that China's 130 million primary school students, 80 million middle school students and 13 million university students are not either mutually integrated into a coordinated system or fully responsive to the objective requirements of the ongoing social development. All these problems have been thoroughly analysed in recent months in China and some objectives and targets have been announced.

Nine-year compulsory education

One of the major targets of the new education policy is to introduce the nine-year compulsory education, step by step (China's school education consists of 6 + 3 + 3, i.e., 6 years of primary school, 3 years of junior middle school and 3 years ot senior middle school). Considering the uneven development of education in the coastal and inland areas and also in the urban and rural areas in the coastal region, the targets have been suitably ordered. In the case of the coastal cities, junior middle school should be universal in the next five years and senior middle school education by the year 2000. In the rural towns, and villages of the coastal provinces, the target is to make junior middle school education universal in the next 10 years or by the end of the Eighth Five-Year Plan. In the rest of the country, consisting mostly of the autonomous regions inhabited by minority nationalities, the objective is to universalise primary education and eradicate illiteracy.

In recent years, China has disclosed more and more data on the continuing illiteracy to the extent of over 25 per cent of the population, the phenomenon of dropout in primary schools in some areas (a recent report said that 7 per cent of the girls in the 7 to 11 age group drop out) and inadequate number of graduates with technical and vocational education. In 1984 there were only 3.7 million vocational and technical school students against 45.54 million in ordinary middle schools. Hence, the new emphasis on universalising junior middle school education and the proposal to train 8 million students in Polytechnic Schools during the Seventh Plan, a 150 per cent increase over the period of the Sixth Plan. As part of the drive to universalise rural primary and middle school education recently, 3250 Party and government cadres were sent in September to train school teachers.

Higher education

For higher education, the emphasis is on better utilisation of existing universities including the radio and T V universities rather than on opening new institutions. Linking higher education with production units and giving autonomy to the universities and colleges as well as simplifying their administration are the two key decisions of the Central Committee.

The educational institutions can now take decisions on their own in the following respects: (i) preparing curricula and teaching materials, (ii) undertaking research projects in collaboration with scientific and technological organisations and institutes and setting up joint machinery involving teaching, research and production, (iii) suggesting appointments of Vice-Presidents and officials and teachers, i.e. leaving only the appointment of the President of the university to the Government, (iv) utilisation of development funds allocated by the State, and (v) developing international exchange by using their own funds.

The target during the Seventh Plan is to turn out 2.6 million graduates through the regular or special college courses, a 70 per cent increase over the Sixth Plan and 200,000 postgraduates which is more than four times the turn-out of the previous Plan. Sending students abroad will continue systematically and their expertise would be fully utilised.

Research is sought to be promoted both in universities as well as the institutes of the Chinese Academy of Science and the Chinese Academy of Social Sciences. According to a rough estimate nearly 70 per cent research is done in China by the universities and 30 per cent by the academies. Most of the universities have their own research institutes. On the other hand, the Chinese Academy of Sciences has its China Science and Technology University which enrols postgraduate students for degrees and the Chinese Academy of Social Sciences has its Institute of Post-Graduate Studies for the same purpose. These academies are autonomous bodies and do not come under the leadership of the State Education Commission. Both academies have launched major plans of expansion.

Important experiments have been introduced in the admission procedure and award of stipends and scholarships. Many educationists have advocated the scrapping of the national college entrance examination which is a very rigid system of selection. Recommendations from schools and work units would now be partially introduced and authority would be given to universities and colleges to admit a certain proportion of students on their own. Until now, the students who qualified for the entrance examination were being allotted the various universities according to their ranking and preference. The system of stipend for every college student will be drastically altered and scholarships for meritorious students would be instituted. The sponsored students are to be financed by their work units while students have to pay for their education. The new policy allows collectives, groups and individuals to start educational institutions and charge fees to the students.

State Education Commission

One of the most important decisions taken in 1985 was to put education under a powerful political leadership in order to give a new shape to the country's educational process. In June, the Ministry of Education of the Central Government was replaced by a State Education Commission headed by a Vice-Premier. The first Chairman of the new Commission is Li Peng who is perhaps tipped to succeed Premier Zhao Ziyang and who is one of the most important State leaders in China today. The former Ministry of Education had one Minister and three Vice-Ministers. The present Commission has eight Vice-Chairmen including the former Education Minister, and Vice-Ministers of the State Planning Commission, the State Economic Commission and State Science and Technology Commission and Vice-Ministers of Finance, Labour and Personnel Ministries. There are members from various parts of China. The composition of this Commission makes it not only an authoritative organ of the State Council (China's Council of Ministers) but also ensures coordination among the relevant key ministries to constantly relate education with development.

The new Commission is entrusted with the responsibility of supervising and implementing the educational reforms and formulate laws and regulations with regard to education. Until now, there were only ad hoc rules and pronouncements which have to be replaced by new regulations to suit the reformed structures. Obviously, the State Education Commission has more power than the former Education Ministry and its decision would easily get the backing of both the Party Central Committee as well as the State Council and the Standing Committee of the National People's Congress. Earlier, the Education Ministry had under its direct supervision about 30 key universities. Now, all educational institutions originally run by Provinces and local governments would be under the Commission's jurisdiction while enjoying autonomy under the new pattern. One of the specific tasks of the new Commission is to develop adult higher education.

Adult Higher Education

The Seventh Plan proposal says: "We should continue to expand adult higher education through such varied forms as radio, TV and correspondence and evening courses and to improve its quality". In fact, this is extremely important for that generation of the Chinese people who could not pursue their studies after completing the junior or senior middle school with the outbreak of the Cultural Revolution in 1966. That is the 35 to 45 age group to whom leadership is currently being shifted according to a concerted national drive to put youth in office at all levels. The Party has also spread the word that they must improve their cultural level by joining various adult higher education programmes like Radio, TV University, correspondence courses, evening colleges and workers' colleges. Visitors to China today frequently meet cadres both at lower and higher levels joining these programmes. Every time there is a new composition of a party committee or state organ, increased educational level of the membership is announced.

In 1983, there were 1196 schools for higher level adult education including 841 universities for staff and workers, four universities for peasants, 304 institutes of education and institutes for teachers' advanced studies, three independent correspondence colleges and 15 institutes for management training. In addition, several colleges run regular evening classes and correspondence courses. During the Cultural Revolution, as part of the Work-Study Programmes, there were as many as 46,810 workers and staff in universities as of 1976. Since the quality of education provided by them was poor, most of them were closed down. Their number came down to 841 in 1983. During the decade of the Cultural Revolution, the number of graduates from the middle level institutions and the specialised middle schools for adult education declined, while during the 1977-1983 period there was enormous emphasis on these levels (Table 3.1). In 1984, the total enrolment in the adult higher education programmes was 1,292,100 out of which the 29 Radio and TV Universities accounted for nearly half the students (Table 3.2).

Central Radio and TV University

There were beginnings of higher education through radio and TV in some big cities of China in the early 1960s. But the experiment was interrupted during the Cultural Revolution. In 1978, a proposal to set up a national system of distance education secured the blessings of Deng Xiaoping and in February 1979, the Central Radio and Television University (CRTVU) was established.

The CRTVU (popularly known as Dianda, short for Dianshe Daxue or television university) is the central system consisting of 28 Provincial TV Universities (Tibet is yet to have one). Under each Provincial TVU there are branch schools in various parts of every big city and further down there are TV classes at the grass-roots level. In every city in China there are at least three television channels: national, provincial and municipal. All three levels coordinate their teaching programmes through TV. Personal contact classes are held at the grass-roots level by local part-time teachers.

The CRTVU had on its roll nearly 600,000 registered students in 1984, besides an estimated additional 800,000 viewers of the teaching programmes. Every year, the students are admitted on the basis of a nation-wide written examination. One out of every five examinees is selected on an average. All students are employed at the time of admission. They are given time off from their organisations to join the university courses. Usually, they get better placements or at least some incentives after their graduation. The CRTVU programme is on the lines of the ordinary college programme of 3 years while the regular university programme lasts 4 years. Examinations are held at the end of each term (i.e., every six months) simultaneously throughout the country. Students have to clear courses and get a certain number of credits to get the degree. If they cannot clear within three years, they become viewers and can take the examinations thereafter.

The CRTVU is under the direct leadership of the State Education Commission with the former Education Minister and a present Vice-Chairman of the Commission as its President. It has 300 full-time teachers. A certain number of full-time staff also work at the provincial universities and city centres. The face-to-face classes in the teaching centres are generally run by part-time tutors.

The programmes of the CRTVU are still geared towards general education at the college level. Courses on natural sciences, social sciences, Chinese literature and foreign languages have been offered from the beginning. Recently, a decision has been taken to emphasise teacher education in view of the paucity of school teachers in China. Another point of attention is going to be agriculture and technology relevant to it. Over the past years, they have added new disciplines like law and journalism. The CRTVU plans to gradually extend its specialised technical programmes.

The method of communication is more or less classroom style, though on the screen. The CRTVU proposes to take the camera to the relevant field of action and make the teaching more interesting. Otherwise, the long lectures or the protracted mathematical calculations which any visitor can watch on Chinese TV can be pretty boring. The CRTVU has prepared special textbooks which the students use. But there is no feedback from the students either through letters or response sheets.

Thus, on the whole, the CRTVU is a vast impersonal network of supplementary higher education which is yet to evolve its academic specialisation or distinct character. Undoubtedly, it provides an opportunity to a large number of working people who otherwise cannot easily acquire higher education. But the innovative specialisation and experimental education to improve upon formal education which one associates with contemporary open universities is not yet exemplified by the CRTVU. Perhaps it is too early to judge it. There are clear indications that the CRTVU leaders are anxious to build it up. There are proposals to have a communication kit with a package of written as well as video materials for each centre and later for each student. But due to paucity of funds this is going to take time. The CRTVU is keen to have its own satellite through which it can relay programmes more easily to all parts of China, rather than use TV time from the CCTV and provincial stations. Moreover, CRTVU has very few students from the countryside—a lacuna which needs to be removed because both formal as well as non-formal distance education at the higher level are still concentrated in urban areas in China. A plan to expand its programmes to the countryside, particularly covering the mountainous regions, is reported to be in the offing.

Some reflections

Despite the relatively slow rate of growth of middle school and college level education, China has major bases of strength at the top and at the bottom. Because of the legacies of the revolution, the Party's basic political education programme at the grass-roots level has remained active. The political lines might have changed from time to time and the method might have varied, but organisational work has continued. The political-economic process through the village or erstwhile production team, the enterprises and other work places where workers and peasants have to discuss policies and do their job, has been the most important primary education process. At the top, the select band of Party experts and intellectuals, scientists and technologists had to keep China going irrespective of strategic shifts and going strong in the face of diverse international challenges. They had to constantly keep world standards in view though they knew that they were far behind them in several spheres. The Cultural Revolution aimed at expanding political education and bridging the gap between school and society. But, in the process, it widened the gap between higher and primary education. The need for acquiring a body of advanced knowledge, step by step, was relegated to the background. The current reforms seek to make up for that loss and gradually develop the cultural level of the Chinese population.

However, China seems to be presently overawed by the quantum of advanced knowledge available in the West and is keen to get closer to that level, come what may. The new curricula in schools and colleges is one indication and the exodus of Chinese students to the West another. Some programmes like Management, Law and Economics courses unmistakeably bear the stamp of US universities. One wonders whether they would be sufficiently permeated by the orientation of Chinese Socialism at the intellectual level.

The present Chinese leadership is surprisingly defensive about China's overall education performance, though they are conscious of the fact that China's second level leadership which started replacing the generation of the veteran Communists this year is the product of China's post-liberation education. The assets of this system, namely, education through the political-economic process, close link between education and production, the long-standing practice of non-formal education being a major component of the system, are being derided at present. More and more structured programmes with greater informational content with emphasis on certificates and degrees are being advocated. Above all, the century old phenomenon of "foreign returned student" is catching on once again. But what is striking is a new seriousness about making education widespread and purposive. The openness to new ideas and willingness to learn from one's own and others' experiences are clear to any visitor to China today. There is both a keenness to use modern technology and a desire to explore new frontiers of knowledge. To give education a high priority is bold enough.

The current reforms have provided new structures which can facilitate debates on various options open to China to evolve an educational system which would facilitate the growth of a "socialist material and moral civilisation in China" as they have proclaimed. At the moment, the reforms are by no means over.

Table 3.1

NUMBER OF GRADUATES FROM VARIOUS KINDS OF ADULT EDUCATION PROGRAMMES IN CHINA 1949–1983

(in ten thousands)

	Total No.	1949-1965	1966-1976	1977-1983
Higher level Institutions of Adult Education	337.25	20.05	41.1	276.1
Middle level Institutions of Adult Education	1,457.11	208.61	121.0	1,127.5
Specialised Middle Schools of Adult Education	593.71	72.11	63.0	458.6
Technical Schools for Workers & Staff and peasants	421.86	27.16	63.0	331.7
Training Schools for Primary School Teachers	171.85	44.95		126.9
Middle Schools for Adult Education	863.40	136.50	58.0	668.9
Primary Schools for Adult Education	3,124.30	851.80	920.6	1,351.9
Classes for illiterates	15,162.30	10,272.30	1,765.9	3,124.1

Note : Out of the 3,372,500 graduates from higher level Institutions of Adult Education 2,180,000 acquired the standard of specialisation in their respective disciplines. This was also true of 29,70,000 out of the 59,37,100 graduates from the middle level institutions.

(Ministry of Education, 1985 : 17)

Table 3.2

VARIOUS LEVELS OF ADULT EDUCATION IN CHINA 1984
(No. of Students and Teachers in ten thousands)

	No. of Institutions	No. of Graduates	No. of enrolled students	No. of Students in Schools	No. of Teachers and Staff Total	Specialised teachers out of them
	1	2	3	4	5	6
Total	—	—	—	**1651.06**	**46.72**	**25.46**
1) Higher level Institutions for Adult Education	1,157	16.39	47.36	129.21	11.45	5.79
Radio & TV University	29	1.70	20.59	59.91	2.36	1.18

Workers and Staff University	850	4.80	7.53	19.23	5.02	2.57
Peasants University	4	0.04	0.05	0.09	0.02	0.01
Cadres of Management Training Institutes	54	0.08	0.99	1.51	0.85	0.30
Autonomous correspondence Institutes	2	0.17	0.01	0.27	0.02	0.01
Other educational institutions	218	4.27	5.94	16.29	3.18	1.72
Correspondence Departments and the Evening Universities run by General Higher level institutions	—	5.33	12.25	31.91	—	—
2) Middle level schools of Adult Education	48,076	289.76	432.91	598.68	23.56	12.93
i) Middle level Specialised Schools	3,171	16.75	42.50	82.70	9.47	4.73
Radio & TV Middle level Specialised schools	19	—	6.76	10.20	0.09	0.03
Middle level Specialised schools for cadres	20	34	0.31	0.33	0.08	0.04
Middle level Specialised schools for workers and staff	1,131	2.34	9.96	16.27	3.88	1.82
Middle level Specialised schools for peasants	219	0.87	4.17	5.60	0.51	0.26
Teachers Training Schools	1,782	13.54	21.30	50.30	4.91	2.58

ii) Middle Schools for Adult Education	44,905	273.01	390.41	515.98	14.09	8.20
Middle Schools for Workers & Staff	24,881	250.49	327.89	411.69	12.15	7.04
Middle schools for peasants	20,024	22.52	62.52	104.29	1.94	1.16
iii) Primary Schools for Adult Education	275,233	405.95	396.06	932.17	11.71	6.70
Primary schools for workers & staff	3,630	8.36	11.55	17.57	0.31	0.12
Primary schools for peasants	271,603	397.59	384.51	914.60	11.40	6.62
Including the classes for illiterates	—	299.22	203.00	608.82	—	3.61

Note : 1. 172 General Higher level institutions offer correspondence education, 199 have evening universities and 85 have both kinds of programmes.

2. The number of students in higher level adult education includes the students in specialised Science courses while the number of students in middle level specialised schools includes the students with average specialisation.

(Ministry of Education, 1985: 26)

Reference

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4

DISTANCE EDUCATION WITH NATIONAL CHARACTERISTICS

ZHAO YUHUI

Over the past two decades, distance education has been developing rapidly with national characteristics in different parts of the world. The British Open University is different from Japan's University of the Air, and distance learning systems in India, Thailand, Australia, Spain, Canada and the United States differ from each other in details. China's distance higher learning system has its own characteristics which have drawn keen interest both at home and abroad. At the graduation ceremony for the first group of graduates from the Central Radio and Television University (CRTVU) on 29 June, 1982, the Chinese Minister of Education pointed out; "Expreience has proved that, in a country like China, with a vast territory, a large population and comparatively backward cultural, scientific and technological development, it is feasible to use the media of radio and television in distance education so as to train more people in a shorter period of time and on a larger scale. It is also a good method of improving the general cultural and scientific level of the whole nation with less manpower and fewer material resources." On the same occasion, the Minister of Broadcasting said: "The radio and television university has opened a new channel of developing another means of higher education and is a method of running universities, which is welcomed by the masses. It can train more people who can be used for the modernisation projects of the country (the modernisation of industry, agriculture, national defence and science and technology) in a faster and more economical way." President of the Japan Society for the Study of Radio-TV Education, Dr. Mitoji Nishimoto, said after a visit to China, "Since China's pioneering effort to open the Beijing Television University in March 1960, I have watched the realisation of an ideal I have devoted my life to." In his chapter on the CRTVU Robert McCormick of the British Open University noted: "Not only can China boast of one of the world's earliest television universities, it has a long tradition of correspondence education dating from the beginning of the century. Although such education has been developed at university level, through special departments attached to universities, the establishment of the CRTVU is the first attempt to set up a national, multi-media, distance-learning institution" (Robert McCormick, 1982).

A Brief Historical Account

During the early sixties, soon after television and broadcasting began to develop in China, the first TV universities (TVUs) were founded in Beijing, Shanghai, Shenyang and other principal cities of the country, to meet the demand for adult education. These new types of universities were well received and showed great potential as soon as they came into being. They aimed at providing a convenient means for adult students to improve their education. In addition to tuition through television, written teaching materials were also provided. Students specialising in Science and the Chinese language studied for four and a half years, while Physics students for five years. During the period from 1960 to 1966, more than 8,000 students graduated from the Beijing TV University and over 50,000 students finished single course studies through its teaching programme. Today, most of them have made valuable contributions to industrial and agricultural enterprises or to cultural and educational institutes. The TV universities of Shanghai, Shenyang and other places were all equally successful. Unfortunately, the dynamic development of the new project was interrupted by the outbreak of the "Cultural Revolution" in 1966.

Since 1976, China has entered a new historical period. The socialist modernisation project calls for a large number of trained people. Many young people, who were suspended from their regular school studies during the ten previous years, were eager to resume their education. It was under such circumstances, that China felt the pressure to re-establish the radio and television universities. In February 1978, the State Council approved a report jointly submitted by the Ministry of Education and the Ministry of Broadcasting on the founding of a national radio and television university. After a year's preparation, the Central Radio and Television University was set up in Beijing in February 1979. Since then, 28 regional TVUs have been set up in provinces, municipalities and autonomous regions, forming a national network of higher education through radio and television. The enrolment of these radio and television universities during the last six years has totalled over 1.4 million. In 1982, 1983 and 1985 more than 400,000 students graduated. In addition, there is another one million free viewers and listeners following TVU courses to improve themselves. The achievements during the last six years have won the radio and TV universities a nation-wide reputation and have attracted the attention of the Chinese Government. As a result, the Proposal of the Seventh-Five-year Plan for National Economic and Social Development states: "There will be considerable expansion of higher education through radio, TV, correspondence and evening courses. Students taking these courses will reach the number of two million by 1990." This plan forecasts a rapid development for radio and TV universities in China.

Position and Function

In order to realise the four modernisation projects of China, it is essential to modernise science and technology, the foundation of which is education. It is the fulfilment of this huge task by the end of the century that calls for a rapid development of radio and television universities.

Although the general level of primary and secondary education in China is higher than in most developing countries, admission of students to higher institutes is relatively limited. In China's conventional colleges and universities there are currently 1.68 million students, and they constitute merely one per cent of the country's adults above the age of 25. This situation is highly incompatible with the demand for modernisation, but under present conditions, it is difficult to change the situation fundamentally, within a short time, by relying solely on conventional colleges and universities.

At present, there is still a shortage of technical and management pesonnel in China. The number of qualified technicians and engineers in 1980 stood at 2.1 million, accounting for only 2.5 per cent of the country's work-force of 83 million in state-owned enterprises and institutes. By 1990, China's total work-force is expected to reach 105 million, of which 4.7 per cent should be composed of technical and engineering personnel. In the industrial and transportation sphere, the proportion of technicians and engineers among the total work-force is to increase from the present 3.5 per cent to 7 per cent. At last 2.9 million new technicians and engineers must be trained for this goal to be achieved. However, the existing colleges and universities can train only 1.4 million between 1980 and 1990, leaving the rest to other types of adult education.

As far as education is concerned, the key problem, at present, lies in teacher training. In principle, primary-school teachers should be at senior-secondary graduate level, and secondary-school teachers should be college or university graduates. But genuinely qualified teachers are still in the minority. According to statistics issued in 1980, of the 2.85 million secondary-school teachers throughout the country, only 800,000 or 28 per cent, had reached college or university graduate level. By 1990, 4.3 million secondary and vocational-school teachers will be required to be college or university graduates, which means some 3.5 million new teachers must be trained over this period. Since conventional colleges and universities can take in no more than 700,000 people, the rest must depend on adult-education schemes.

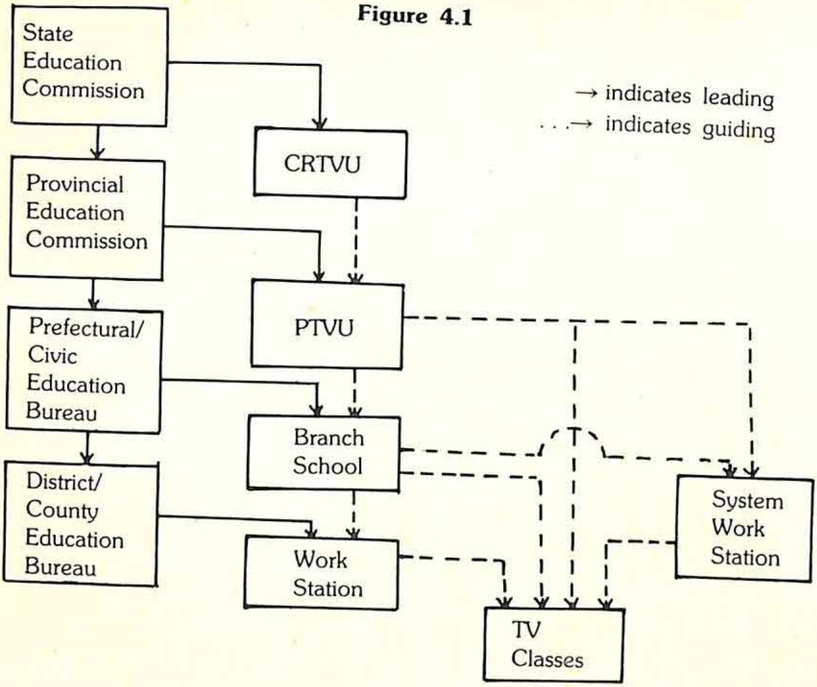
The result of irrational curriculm arrangement in higher education in the past has resulted now in a great shortage of trained personnel in such specialities as finance, law, liberal arts and agriculture. The neglect in training specialised personnel in light industry, textiles and civil engineering in science-and-engineering universities has also resulted in a shortage of technicians and engineers in these domains. In addition, large numbers of educated young people who are looking for jobs, also want to continue their education. College and university graduates who are working must also regularly update their existing knowledge. Thus, radio and TV universities are called upon to make their contribution. Since TVUs need fewer funds and can train more people in a shorter period of time, they suit the form of education demanded by all domains. In short, it is necessary to step up the development of radio and TV universities to meet the demands of the national economy and social development.

The Radio and Television Systems of Higher Education

Taking into account the number of students and their geographic distribution, China's Radio and Television University is not only the largest institute of higher education in China, but also the greatest distance teaching university in the world. The radio and television system of higher education covering the whole country is administered by the CRTVU in Beijing. Twenty-eight PTVUs are located in respective provincial capitals. More than 500 branch schools have been established in prefectures or towns. Work stations which are at the fourth level are run either by the district/country education bureau or by a particular industry, and there are 20,000 "teaching and learning classes" (usually called TV classes) which are run by work units. There are other kinds of branch schools organised by particular industries, such as the railways and the bureau of light industry. (All industrial concerns are state-controlled and administered by the appropriate bureau.)

The CRTVU falls jointly under the State Commission of Education and the Ministry of Broadcasting. The rest of the system is controlled and financed by provincial and district Governments. The TV universities at all levels are closely linked with each other. The CRTVU controls the educational and administrative work of provincial TV universities, which in turn control their branch schools. The CRTVU is responsible for planning the courses which are broadcast to the whole country. It is also responsible for the production and transmission of major teaching programmes as well as the distribution of the teaching materials, including textbooks, video tapes and audio cassettes. In addition to courses offered by the CRTVU, PTVUs produce and transmit teaching programmes for their own specialised courses, and these are aimed at meeting provincial needs.

Figure 4.1


State Education Commission
→ indicates leading
. . .→ indicates guiding
CRTVU
Provincial Education Commission
Prefectural/ Civic Education Bureau
PTVU
Branch School
District/ County Education Bureau
Work Station
System Work Station
TV Classes

Responsibilities shared by the TVUs at five levels are as follows:
The CRTVU

1. makes long-term plans for the development of the TVU system and yearly plans for admission;
2. guides teaching administration of PTVUs and coordinates academic work shared by more than one PTVU;
3. makes teaching plans to be carried out nationally and produces programmes to be broadcast nation-wide;
4. develops and publishes print teaching materials, and produces and distributes audio cassettes and video tapes for courses offered nationally;
5. prepares unified entrance and end-of-semester examination papers and marking standards;
6. organises training for teachers, administrative staff and technicians of the national TVU system; and
7. does distance education research and exchanges experiences with similar institutes at home and abroad.

PTVUs

1. guide teaching administration of their branch schools, work stations and TV classes directly attached to them;
2. organise the implementation of the teaching plans made by the CRTVU, and make teaching plans for courses offered provincially;
3. produce and transmit teaching programmes for regional use;
4. develop and publish print teaching materials, and produce and distribute audio cassettes and video tapes for courses offered provincially;
5. organise entrance and end-of-semester examinations and the marking of examination papers;
6. admit students and issue diplomas & certificates;
7. train teachers, administrative staff and technicians of provincial TVUs; and
8. do distance education research and exchange experiences with each other.

Branch Schools

1. guide teaching administration of work stations and TV classes directly attached to them;

Table 4.1

STAFF IN THE TVU SYSTEM

	1979	1980	1981	1982	1983	1984	1985	1986
Total staff	5,306	6,849	8,412	9,702	11,301	23,568	24,754	30,680
Full-time teachers	3,871	5,540	6,480	10,101	11,475	11,732	11,229	13,144
Part-time teachers	12,039	14,804	15,521	18,700	25,237	30,285	15,795	21,618

2. implement teaching plans made by the CRTVU and PTVU;
3. organise the subscription and distribution of teaching materials;
4. conduct examinations and tests;
5. admit and register students, and keep their study records;
6. employ tutors and train them; and
7. oversee tutorials, laboratory work and field studies.

Work Stations

1. organise TV classes and guide their management;
2. organise tutorials, laboratory work and field studies; and
3. distribute teaching material.

TV Classes

1. administer teaching and learning classes;
2. make timetable for every semester;;
3. organise viewing of and listening to teaching programmes, tutoring, laboratory work and field studies;
4. encourage students to take part in physical training and recreational activities outside class; and
5. keep contact with work units from which the students come.

China's radio and television universities at five levels share their responsibilities on the basis of balancing centralisation and decentralisation with the CRTVU as their centre. Along with the development of the TVU system, the number of its staff has been increasing (Table 4.1).

Courses of Study and Use of Media

The courses presented to registered students are all at undergraduate level. There are other courses for continuing education and Secondary Vocational education available for short term training.

In the past eight years of its existence, the CRTVU has offered 150 courses in the subject areas of mathematics, physics, chemistry, biology, mechanical engineering, electronic engineering, chemical engineering, civil engineering, economics, accounting, statistics, finance, banking, industrial management, commercial management, archives management, journalism, law, library science, Chinese language and literature, etc. In addition to courses offered by the CRTVU, PTVUs and their branch schools offer their own courses following an overall pre-established teaching plan to coordinate their outputs at the three levels. Work stations and TV classes may organise special courses to suit the needs of work units. The Shanghai TV University once offered courses specialising in medicine, and the Heilongjiang Provincial TV University had its own courses offered to train personnel needed in agriculture. In 1986, eight provincial TV universities offered courses specialising in the English language to train secondary school English teachers and other English language workers needed in tourism and foreign trade. In 1987, the total number of courses offered by TVUs at different levels amounted to more than 400, constituting 81 specialities. A TVU student must obtain less than 60 per cent of his/her total credits by learning courses offered by the CRTVU.

The TV university courses are multi-media, consisting of radio, television and print materials. The proportion of TV programmes for science and engineering courses is greater than that of other media, whereas radio used to be the main medium for social science courses. Since the satellite transmission for TVU programmes began in 1986, TV programmes of social science courses have increased greatly. Audio cassettes and video tapes are also in use for some courses to make up for insufficient transmission time and to provide more convenient access for distance learners. Over a million audio-visual copies of teaching materials are produced and duplicated each year.

Print teaching materials are available to supplement radio/TV programmes for all courses. These materials are divided into three types: course books, reference books and study guides. Most of the course books, introduced or compiled by the CRTVU, are more or less the same as the text books used in conventional colleges and universities. Reference books and study guides are compiled by radio/TV presenters with the help of TVU teachers at the CRTVU and PRVUs. During the past eight years, more than 400 print books totalling 40,000,000 copies have been published by the CRTVU Publishing House. These books can be bought in the shops of national book retailers New China Bookstores (Xinhua Shu Dian).

At present, radio and TV teaching programmes are, to a large extent, direct transcription of conventional university classroom teaching. Presenters are chosen from key universities all over China. In the initial stage, it was necessary for TVUs to adopt textbooks used in conventional universities and to choose academics with a good university teaching background as presenters so that a high standard of tuition can be guaranteed. These two measures have proved to be effective. However, this teaching pattern is bound to be changed. The concept of the multi-media teaching package has been introduced to China's TVU teachers. The package is composed of integrated radio/TV programmes, course books and study guides. Distance teaching print materials suitable for radio and television presentation are being prepared. More imaginative use of radio and television is being researched on and new type of programmes have been produced on a trial basis. This implies a change in role for radio and television. A prerequisite for the change lies in the need to increase the teaching function of print. It will take time for the TVU system to replace its existing courses with the new type of multi-media ones.

Radio and TV teaching programmes had been produced by the Central People's Radio Station and the Central China Television before 1983, and from that year on, more and more audio-visual teaching programmes have been produced by the CRTVU and PTVUs. There are more than 40 production centres within the TVU system. Among them the production centre of the CRTVU is the largest and best equipped as a World Bank loan project. Another nine PTVU production centres in principal cities are better equipped than the rest. The TVU system plans to produce all the radio and television programmes in their own production centres within a few years. The transmisssion of radio and television teaching programmes is arranged as follows: (Table 4.2)

Table 4.2

Organisation which puts up the programmes	Type of transmission media used	Area broadcast to	Time available
CCTV (Courses offered by CRTVU)	Microwave	Nationwide	33 teaching hours* per week (8:30–11:30; 13:30–16:10)
CETV (Courses offered by CRTVU)	Satellite	Nationwide	49 teaching hours per week (16:50–23:00)

Provincial and civic radio/TV stations (courses offered by CRTVU and PTVUs)	Radio and television	Regionally	varies locally
Branch schools, Work Stations and TV classes	Audio-visual equipment, audio cassettes and video tapes		

* One teaching hour lasts 50 minutes for a radio/TV programme.

Although radio and TV programmes are supplemented with print teaching materials, face-to-face tuition is also available to students. Tutoring is necessary because of two reasons: (a) Presenters of radio and TV programmes cannot answer students' questions directly and there is no immediate feedback for the presenters to adjust his/her teaching. (b) Registered students are organised into TV classes, listening to and watching programmes together. Television image and radio sound may be unclear because of technical or other reasons.

Tutors work full-time or part-time. In 1986, the number of full-time tutors was 11,229, and part-time tutors 14,795. There are teachers, researchers and technicians invited from conventional universities, research institutes and large enterprises. Besides tuition, tutors are also responsible for correcting students' homework and directing their self-study. In some TV classes, tutors teach courses organised by their branch schools or by their work units to meet local needs. For science and engineering courses, tutors help to organise practical laboratory work and other activities aimed at putting theory into practice.

Practical laboratory work used to be done in conventional universities or research institutes during public and school holidays or at other times when the laboratories were not in use. Along with the setting up of the TV university's own laboratories, more and more laboratory work has been done in the TV university's study centres where there is a laboratory, an audio-visual lab and a small library. As a World Bank project, 85 study centres of this kind have been built up. In order to enable students in remote areas to do experimental work, physics, chemistry, mechanics and electronics experiment kits have been designed, and some of them have been put to use in large numbers.

For laboratory-based courses, students cannot obtain their credits until they have completed the required practical experiments to their tutors' satisfaction. There is some flexibility in the number of experiments which students are required to carry out, as conditions vary from place to place. Students having access to better equipped laboratories may perform more experiments than those who do not have a well equipped laboratory at their disposal. However, they must complete the required minimum number of experiments, as without this they cannot graduate or be awarded diplomas.

Engineering majors have to go to factories to gain practical experiences during their vacations, and they complete a project before graduation. Social science majors have to conduct field studies, and prepare a report of their findings. Through the above activities, students are expected to cultivate their ability to study by themselves and work independently.

The period of schooling is two or three years for registered students who study full-time. There are two semesters per year with a total of 18 teaching weeks in each semester, plus two weeks for revision and examinations. A credit system is used, based upon one credit for each 18 hours of teaching and learning. A total of not less than 160 credits are required for a two-year-degree diploma, and 240 for a three-year-degree diploma. The degrees are equal to those awarded by conventional two or three year colleges. Students who are successful in the examinations obtain credits. They are then awarded certificates or diplomas according to the credits they have accumulated.

Categories of Students and Modes of Learning

The TV university's target students are in-service adults, fresh secondary school graduates and young school leavers waiting to be assigned jobs. The in-service adults, aged about 30, are enrolled according to plans for training drawn up by their respective work units, after which admission is granted to those who pass the national entrance examination held by the State Education Commission for adult higher education. Fresh secondary school graduates are admitted through the national entrance examination for conventional universities and colleges. In this respect, TVUs are regarded as a new type of "conventional" universities. The TVU system began to enrol fresh secondary school graduates from the year 1986. Young people waiting for jobs must pass the entrance examination for adults before admission. The number of this type of students has kept increasing since TVUs were opened to them.

The three above-mentioned types of students are called registered students who enjoy a formal status as students of the TV university. These students are organised into TV classes and taken care of by a class manager and several tutors. There is still another type of students who do not take the entrance examination and who study on a self-instructional basis. They are called "free viewers and listeners." This type has increased so rapidly that it was hard for the TVU system to cater for them. In 1985, the State Education Commission decided to stop receiving free viewers and listeners for a period of time, during which those who had begun learning were registered and organised into study groups. The remaining free viewers and listeners from 1979 to 1985 were allowed to be issued diplomas or single-course certificates if they took and passed the final examinations.

In-service adult students can study full-time, part-time and during their spare-time depending on the amount of time they are given by the work units for which they come. Fresh secondary school graduates all study full-time, whereas young school leavers can choose their mode of study by themselves. Full-time students must finish their study in two or three years according to different speciality teaching plans. Part-time students must finish their courses required for a degree in three to six years, and spare-time students are allowed to accumulate credits in ten years.

The number of undergraduate students varies from year to year with the minimum 97,502, and the maximum 673,634, except free viewers and listeners, the number of whom has been estimated at about one million in total. Over the eight years, 599,941 students have finished all-subject courses and graduated with diplomas, and 618,742 students have completed one-subject courses and have been awarded certificates (Table 4.3).

In-service adult students include workers, teachers, technicians, Army men, Government functionaries, etc. The occupations of students vary according to different specialities and modes of study. Of those specialising in Science and Engineering, workers and technicians form the majority, and more teachers and Government functionaries attend courses specialising in Social Science. Relatively more full-time students are workers, and more part-time and spare-time students are teachers. Full-time students are released from work and continue to receive full salary as well as free medical care and other welfare benefits. However, they are not given production bonuses and other work-related benefits. Part-time

Table 4.3

STUDENTS IN THE TVU SYSTEM

	Intake			Graduates			Undergraduates		
	All— Subject Students	One— Subject Students	Total	All— Subject Students	One— Subject Students	Total	All— Subject Students	One— Subject Students	Total
1979	97,746	244,725	322,471	—	—	—	97,502	182,656	280,158
1980	79,377	80,124	159,501	—	92,714	92,714	167,962	156,410	324,372
1981	—	—	—	—	47,590	47,590	170,391	97,635	268,026
1982	184,973	68,083	253,056	92,022	94,566	186,588	258,488	88,679	347,167
1983	235,567	18,728	254,295	67,905	61,286	129,191	414,054	64,704	478,758
1984	205,858	11,992	217,850	17,032	105,185	122,217	599,068	62,249	663,317
1985	273,112	11,446	284,558	165,204	75,386	240,590	673,634	19,986	693,620
1986	215,200	21,861	237,061	248,778	142,015	390,793	604,437	38,978	643,415
Total	1,291,833	456,959	1,748,792	599,941	618,742	1,209,683			

* In 1981, no students were enrolled because of insufficient transmission time.

** The total number of one-subject intakes is smaller than that of graduates. This is because all-subject students can become one-subject students if they are dropped out.

students are given the equivalent of one to three working days of work per week, and enjoy full pay.

The students' progress is assessed, in the main, by examinations at the end of each semester. Examinations are set centrally but organised locally. Such examinations are held on the same date throughout the country. The standards and conduct of the exams are strictly safeguarded. A dropout system is adopted for in-service adult students who study full-time. These students must go back to their original work units if they fail two end-of-semester exams in any one semester, or three exams in different semesters. Such a student may go on to become spare-time student taking a single course if this is approved by the leadership of his/her work unit. The dropout system is also applicable to other full-time students who study all subjects.

After graduation, in-service students are recognised as having status equivalent to that of conventional college graduates and, where necessary, they are assigned new jobs in their original work units to suit their own newly acquired speciality and the needs of the unit. They receive the same salary as conventional college graduates. As to the other categories of students (secondary school graduates and young school leavers), they will be given employment according to their study records by the local employment departments. A considerably great number of this kind of TVU graduates become secondary school teachers after graduation. When they are assigned a new job, they will be treated as equal to conventional college graduates.

Financial Resources and Cost Effectiveness

The TVU system gets its budget from a variety of resources. The CRTVU is administered and funded by the State Education Commission with the CCTV and CETV being responsible for television transmission cost. It also gets financial support from the ministries which ask the CRTVU to help train personnel needed by them.

The PTVUs are under the auspices of provincial governments, and their branch schools under prefectural or civic governments. Funds for TV universities are part of the educational budget of governments at various levels. The budget varies from place to place because of the unbalanced economic development in different parts of the country.

District/county work stations are funded by education bureaus of local governments, and work stations are financially supported by their respective systems (i.e. railway, post and telecommunications, industrial and commercial concerns etc.). Various kinds of work stations have different budgets because of varied conditions.

TV classes run by work units get financial support from factories, shops, and government bureaus which send students to be trained at TVUs, and TV classes run by TV universities at various levels to cater for secondary school graduates, are aided by governments at corresponding levels. Each student has half the amount of money provided by the government for a conventional university student. The other kind of TV classes composed of young school leavers can be financially supported by certain work units which will employ graduates from these classes.

In general, TV university students are free from tuition fees except free viewers and listerners who have to pay for registration and examinations. However, all students must pay for their own study expenses, such as print teaching materials and stationery etc.

It has been estimated that on an average one-third of the cost can be saved to produce a TVU graduate who studies full-time and continues to receive a full salary, two-thirds can be saved to turn out a spare-time graduate. This estimation has been proved correct by a cost analysis project done by the Liaoning Provincial TV University which is in the north-east of China.

The development and cost effectiveness of the radio and television university system have been positively acknowledged by government leaders.

Achievements and Limitations

China's nation-wide system of higher education by radio and television was set up in a vast territory of 9.6 million square kilometres during the last six years of TVU development. Courses offered at all levels are increasing year by year. Enrolled students had increased to more than one million by 1984. The ratio between the first intake and the first graduate is 100:69; the dropout ratio is 31 per cent. TVU graduates have been praised by people from all walks of life. It has been generally acknowledged by part-time tutors from conventional universities that the level of TVU graduates is about the same as that of conventional three-year college graduates. One great advantage is that they can be turned out at a much lower cost compared with conventional college graduates. One-third of the cost can be saved to produce a TVU graduate who studies full-time and continues to receive a full salary. Part-time and spare-time students cost even less. TVU graduates have made valuable contributions after they return to their original work units or new job assignments. Some 60 per cent of over 4,000 students majoring in science and engineering among the first intake of the Shanghai TV University obtain on an average 80 per cent marks in the four compulsory courses of the final semseter. Of the average marks of all courses, the 24 graduates, who came from the Shanghai Research Institute of Semi-conductor Elements, obtained 82.7 per cent as the lowest, and 96 per cent as the highest. Their average marks in mathematics, physics and chemistry were well over 85 per cent. One of the students passed the entrance examination for M.A. degree course at Tongji University, one of the Universities in China. Another graduate of Beijing TV University is now studying for a PhD degree in the computer faculty of Vanderbilt University in the United States. An investigation on 407 graduates carried out by the Changzhou Branch School of Jiangsu Provincial TV University shows that 88 have been promoted to cadre level (making up 21.6 per cent of the total) 180 are doing research and technical work (44.2 per cent), 19 are teachers (4.7 per cent) and 127 are doing other work (29.4 per cent). About 148 out of the 407 have made valuable contributions to design, research and technical innovation.

What has been described applies to TVU graduates all over the country. China's radio and television universities have made remarkable strides in the past six years. However, they are still at the initial stage. There are certain educational and administrative problems to be overcome. In order to expand the TV universities further, improvements have to be made in the following aspects:

1. There is a general shortage of staff. There are not enough highly qualified academics, such as Lecturers, Associate Professors, Professors and Engineers. Administative staff generally lack knowledge of the modern administrative techniques necessary for distance education.

2. The courses offered cannot meet the needs of students from all walks of life. Teaching materials adopted are mainly those used in classrooms of conventional universities. TV teaching programmes, on the whole, follow the format of blackboard lectures while radio teaching programmes are basiclly recordings of face-to-face lectures. These traditional teaching styles are not suitable for

transmitting knowledge by television or radio.

3. The TV universities have not yet set up their own studios, laboratories and printing shops. Equipment for modern administration is still in short supply.

4. Transmission time is far from sufficient to keep up with the increasing demands for new courses. Nor is it convenient for spare-time students because all teaching programmes are broadcast during the day. Television coverage does not reach the vast countryside and remote border areas.

5. The radio and television university is a new type of university. It is different from conventional universities, not only in teaching modes but also in its target students. Therefore, the former should be different from the latter in admission, courses, training aims, period of study, structure of organisation and system of leadership, etc. Radio and television universities cannot operate well without constant research on distance education. The number of trained staff qualified for doing research on educational technology is inadequate.

Plans for Expansion

Zhao Ziyang, Premier of the Chinese government, pointed out in 1984: "TV universities are a valuable form of education; 92,000 students graduated last year. Those who passed the examinations were awarded diplomas. The level of graduates is satisfactory. The development of TV universities is suitable for China as it is an effective way of training more people at lower cost in a shorter period of time... It is very difficult for conventional universities to increase admission by tens of thousands within one year." In order to expand TV universities further, the Chinese government plans to hire a broadcasting satellite. A loan provided by the World Bank for China's TVU development project is available now. By 1990, the number of students studying in TV universities will reach two million. To meet these broad objectives, new UHF transmitters are being built in nine principal cities, and 85 Study Centres will be set up all over the country by the end of 1986. There will be an audio/video lab, laboratory and a library in each Study Centre. The CRTVU is to set up a teaching programme production centre, a teacher training centre, a computer centre, a printing shop and a library.

The range of courses will be greatly extended. Some 200 courses covering about 80 specialities are planned to be offered by 1990.

By 1986, the CRTVU had plans to compile new teaching materials characteristic of distance teaching and convenient for self-instruction for 10 to 15 courses. By 1990, over a third of teaching materials will be compiled jointly by the CRTVU and PTVUs.

Training of staff and research on distance education will be strengthened. Different groups will be trained on a large scale. Some of the training will be operated by Chinese experts within the CRTVU and PTVUs, some will be conducted by foreign experts in China and some will take place abroad. An association aimed at research on higher education by radio and television is being prepared. China's radio and television universities were initiated at the beginning of the 1960s, suspended for ten years and resumed at the end of the 1970s. China's TVUs started to develop steadily from the beginning of the 1980s. In the 1990s, two out of five university students will be enrolled in a TVU. Looking ahead, China's radio and television universities will play an important role in higher education as well as in the national economy and social development. To fulfil this huge task, China's radio and television universities are bound to develop in a big way. We are eager to exchange experience with other countries. Based on our own experiences and experiences from abroad, we want to develop distance education of higher learning with our national characteristics.

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5

THE FERNUNIVERSITÄT*

G. RAM REDDY

Faced with the problem of too many students and limited capacity available in the existing universities in the Federal Republic of Germany, the search for the distance education system began in the 1970s. While the discussion veered round to using distance education to answer some of the educational problems, there was no agreement on how and at what level an initiative for an open university should be taken. Since in the political system of the country Lands (States) are autonomous, no nation-wide system of distance education could be started. In order to avoid delay, the Minister for Science and Research of North-Rhine West Phalia took the initiative to establish such an open university in his State.

The Fernuniversität was established by an act of Parliament of the State of North-Rhine West Phalia in November 1974. It has been set up with a view to: (a) increase the enrolment capacity of German universities, (b) develop a system of academic continuing education, and, (c) support the reform of university teaching in post-secondary education.

Unlike the British Open University and a few others, the Fernuniversität requires a formal university entrance qualification before enrolling students in degree programmes. However, its continuing education courses are meant for those who are unable to attend the traditional university. Such students are registered as 'guest students' and they can choose any course or course combination of the course programme they want to study.

The principles which govern the curriculum developed at the Fernuniversität are: (a) the diploma courses have to be studied for a period of 3 or 4 years; (b) the level of course study must be comparable with other German universities; (c) the formal way of studying and the examinations must be comparable to other universities; (d) each course must be based mainly on written material, because it is to be used exclusively in an external teaching system; and (e) the subject must be developed for part-time study by adults who have full-time or part-time employment as well as for persons with a fresh university entrance qualification (Bartels, 1983; 509).

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* In preparing this paper, I have relied heavily on the material supplied to me during my visit to the Fernuniversität, Hagen, in 1984; and the articles written by Jorn Bartels and Helmuth Kuffner.

There are five departments in the university which offer a variety of programmes (Kuffner, 1983 : 4, 5). They are mathematics and computer science, economics, law, electrical engineering, and educational and social sciences. The university offers six course programmes in mathematics, electrical engineering, computer sciences, economy, teacher training leading to a certificate and magister degree. Several non-degree course programmes for further education are offered—e.g. teacher training for the handicapped, teacher training for music education, teacher training for teaching law in schools, etc. The university has plans to start courses in law, engineering, physics, chemistry, etc. Of all the academic disciplines, economics is the most popular.

The University has about 52 Professors and 232 other academics. As is the case with other open universities, most of the Professors and academic staff did not have any previous experience in distance education before joining the Fernuniversität They are the products of the traditional university system. "Maybe this is the reason why some Professors sometimes have problems accepting the different situations between a distance university and a campus-based university. Most of our Professors stress that the unity of teaching and research applies to distance education as well as to other forms of university teaching" (Bartels, 1983 : 508, 509).

While the print material forms the basis of most of the courses, it is sometimes supplemented by audio cassettes, video tapes, slides or home kits. Generally, audio and video tapes have a supplementary role to the written material. Audio tapes are sent to students who have enrolled in a course which includes audio tapes. The video tapes are provided at the study centres. The University has been examining the possibility of using the new videotex which uses television and telephone to allow access to computerised information. In the early stages, the university depended heavily on the academics of other German universities to produce the courses. Now, its own staff are able to produce a large number of these courses. However, the University still uses outside experts to produce some of its courses.

There are four types of students in the University: (a) full-time students, (b) part-time students, (c) guest students and (d) visiting students (Bartels, 1983 : 505). Full-time students are those who study for a degree such as a diploma, master of arts, or of the state examination, and they must possess formal entrance qualifications. These courses are a full-time occupation for the students. Such students are generally younger in age. Part-time students, who form the largest group in the Fernuniversität, are those who have discontinued studies after obtaining university entrance qualifications, but would now like to resume their university education. They would like to obtain formal qualifications and want to take advantage of the second chance. Guest students are those who would like to take advantage of the continuing education and life-long learning programmes of the university. They are neither required to have a formal entrance qualification, nor can they get a degree at the Fernuniversität. They take these courses mainly to advance their own education. Visiting students are those who are enrolled as full-time students in a traditional university, but study at the Fernuniversität in order to complete their courses of studies there (Kuffner, 1983 and Bartels, 1983).

The university registered a remarkable increase in the number of students in the early years, and at one time there were about 37,000 students on its rolls. Later, however, there was a sudden decrease in their numbers because they were required to pay for their study material. It is interesting to note that most of the students in this university are males who constitute about 77 per cent. The proportion of female students has remained constant over the years. Handicapped students constitute about 20 per cent. The students of this university are, on an average, older than students from campus-based universities in the Federal Republic of Germany (Bartels 1983 : 519, and Kuffner, 1983 : 9).

The typical students' profile at the Fernuniversitat is: student of economics, male, 30 years of age and married and perhaps with one or two children, employed as a salesman in an industrial company. His father did not attend a college or university. He has got the university entrance qualification and has enrolled as a part-time student and aims to achieve the diploma-degree in economics (Kuffner, 1983).

An analysis of statistics of students reveals that the university has been facing the dropout problem. In the first few years, only about one-third of the students discontinued their studies but later the dropout rate increased to about 50 per cent. It has been observed that female students discontinue more frequently than male students. The older the students, the lower the dropout rate. Nearly 81 per cent of students under 25 discontinue their studies after the first year, but only about one-third of the students over 46 years of age discontinue.

The Ministry of Science and Research of North-Rhine West Phalia looks after the university. It is, like its traditional counterparts, an autonomous organisation. The major policy making body of the university is the Senate which is composed of Professors, other academic staff, technical, secretarial and clerical staff and representatives of the students. The Konvent (Assembly) is concerned with the drawing up of the university's statutes and contributes to its policy making. It consists of a team of Professors, Lecturers and students. The Kuvativorn consists of representatives from other universities, ministries of other lands, radio and television, and employees of the organisation.

The Rector is the head of the University and is assisted by Pro-Rectors. There are Standing Commissions of Academic Affairs, Research, Continuing Education, and Structure and Finance. The University is broadly organised into three wings—departments, central institutes and the central administration. The academic units are known as the departments. The Central Insitute for Distance Research, Centre for Development of Distance Education, library and computer centre constitute the central institutions. The central administration has under it organisation, student services, personnel services and technical production. The study centres are dealt with by the student services.

Like other open universities, the Fernuniversität attaches great importance to study centres. They are equipped with audio-visual media, projectors, recorders, reference library, photocopying machines, etc. They offer information and counselling for people who have not yet enrolled as students. They provide opportunities for students to meet other students. There are 38 study sentres in the Fernuniversität. It is not compulsory for students to use the study centres.

In student evaluation, continuous assessment and end-of-course tests are used. Continuous assessment is built into the course material. The importance attached to assignments is not the same in all faculties; it varies from one faculty to the other. End-of-course tests are part of the pre- and final-examination.

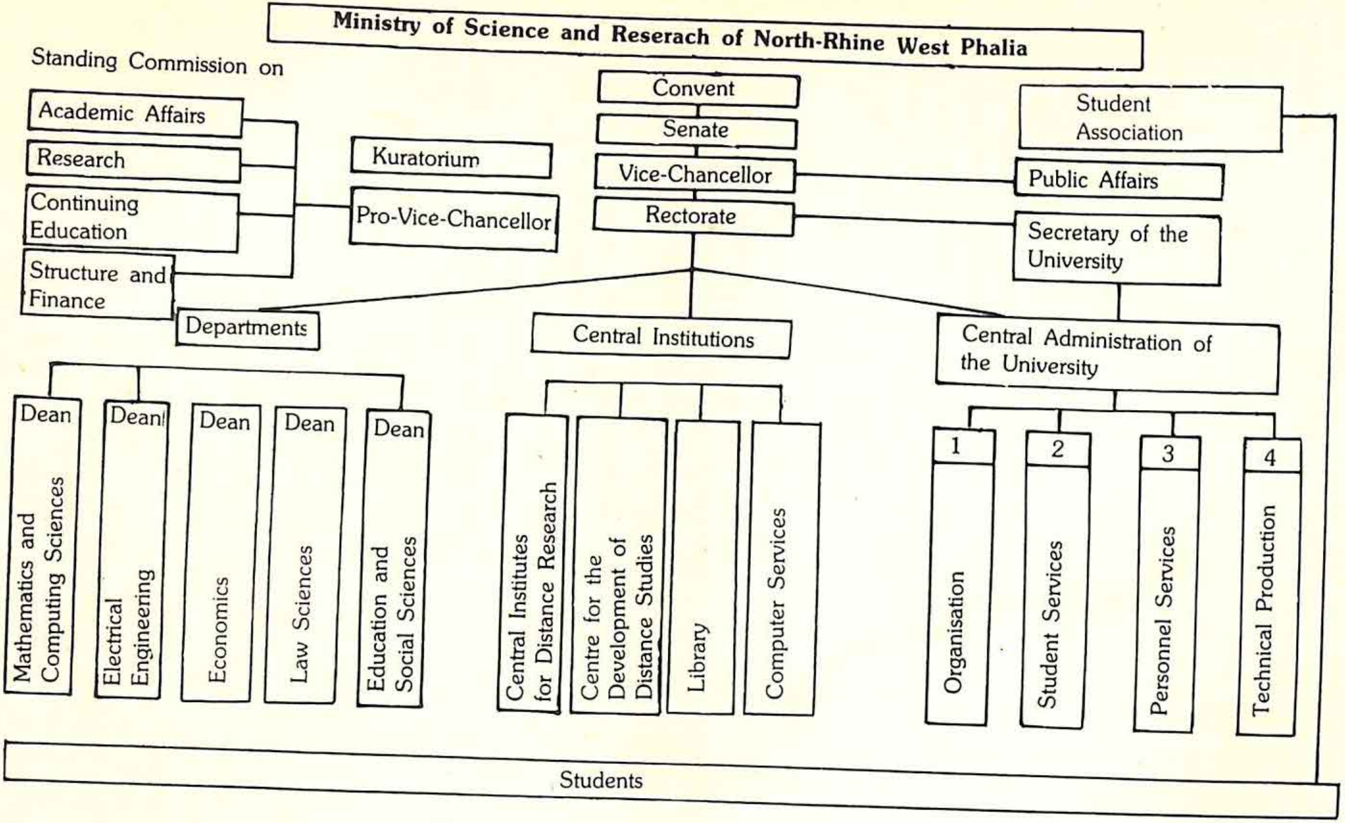
Since its inception in 1974, the University has made remarkable progress. There are about 30,000 students on its rolls. It is estimated that the Fernuniversität took about five years "to develop a stable system allowing high flexibility in course design, course programme variations and in handling a large number of students" (Bartels, 1983).

There is a regular system of institutional evaluation in this university in which a small group of evaluators carry out investigations and study students' performance, students' habits, dropout reasons, use of media, etc. There are three types of evaluation research: (a) Evaluation of individual course with the aim of improving material sent out to students; (b) Evaluation of the organisational and institutional aspects of distance education; and (c) Evaluation of the teaching system, research into dropout, learning conditions, etc. The results of this evaluation are fed back to the persons or departments concerned.

One of the problems which the university faces is that of accommodation. It is still spread over 10 buildings located all over the town. In recent years, a few buildings have been constructed on the campus but they are enough to accommodate only one-third of the staff.

Like several other educational institutions, the Fernuniversität faces financial problems. Since the University was founded by the Land of North-Rhine West Phalia, it is the responsibility of this Land to finance it. While in the first few years the University received financial support from both the State Government and the Federal Government in Bonn, it started facing financial problems later. This led to reduction of certain services offered to students, e.g., study material at the University is no longer free of charge for students.

Even though it is relatively young, the Fernuniversität has attracted students from different parts of Germany. Though the University derived its inspiration from the British Open University, it has developed its own system of distance education in which the emphasis is on print materials and the learning packages. Its course material has helped not only its own students, but also students and academic staff of other conventional universities. As Holmberg (1985) rightly observes: "The academic standards of the Fernuniversität are very high. It seems probable that even more is required of its graduate than of those of the other German universities. Its study system is very rigid."



The administration structure of the Fernuniversität

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6

TRADITION AND INNOVATION— THE FERNUNIVERSITÄT IN HAGEN

OTTO PETERS

The Founding Committee of the Fernuniversität had to solve a great problem nine years ago: the *dichotomy of its instructional system.* Scientific knowledge was to be taught according to the same regulations for examinations and according to the same standards as at the other universities of our country. This academic teaching, although reformed in many ways during the last few decades, remained basically *traditional.* In a very effective process of academic qualification, the Professors learn to know exactly—subconsciously and also consciously—*what* to teach and how to teach. Now, in the new institution to be planned, the Professors were expected to adapt their teaching to an entirely new situation. In order to be able to increase the *availability* and *accessibility* of academic teaching, they were to accept new systems of planning, organising and communicating. In other words: they had to get acquainted and actually learn to deal with important aspects of *instructional technology.* The structural antagonism inherent in such a plan is obvious—as most professors disregard and reject activities such as, e.g., *curriculum construction*, the *use of technical media, tests* and *systematic evaluation.* I believe the real accomplishment of the Fernuniversität is that this antagonism could be overcome to a very large degree. The two main elements of our instructional system, a traditional way of producing knowledge and a technological way of its dissemination, usually fitting together like fire and water—have been absorbed and integrated in the daily working routine of our Professors and their assistants in a very effective way. Let me deal with this phenomenon, as I consider this to be our main strategy towards the optimisation of our teaching.

Elsewhere, governments and experts tried to evade this dichotomy. When founding their universities for distance studies, they quite often hired an administrative management and educational technologists first and commissioned them to build up the instructional system of the new institution. Having done this, the instructional content and scientific knowledge was bought from other universities and developed further by specialists in educational technology and, thus, adapted to the technological instructional system. Clearly, you can achieve good learning results in a technical sense and also develop a strong sense of perfection in educational technology in this way at such a new university. But is there not the danger that technological methods and media and the instructional system become more important than the subject matter and its close connection to the research process? Do you not cut away academic teaching from its roots when you proceed in this way? Complaints of this kind could be heard at the 1982 Conference of the International Council on Distance Education. An Australian delegate, Jerry Grimwade, demanded that the Council should be joined by more Professors of the academic disciplines rather than by so many administrators and educational technologists. And Stephen Griew, the President of Athabasca University, spoke about "The Neglected Role of Disciplinary Research in the Distance University", arguing very much in the same way. Observing this development I am very glad that the Founding Committee of the Fernuniversität decided that the Fernuniversität was to be an autonomous *university* in the first line. This was done as a consequence of the traditional idea of the *unity of research and academic teaching* which still prevails in our country. It was felt that a distance university must produce *original* knowledge and not be reduced to a well organised delivery system of teaching material spreading knowledge produced elsewhere. Thus, the first measures taken aimed at the establishment of academic *faculties*. We have now five—*Economics, Mathematics and Computer Science, Electrical Engineering, Educational and Social Sciences* including also *Arts* and *Law*. So far our Ministry has appointed 56 full Professors selected and proposed by our faculties who devote their erudition and academic teaching skills *entirely* to distance students. To teach at a distance is their main task and neither a secondary task nor a hobby. They concentrate on this particular field of activity in a way which, I believe, can never be expected from Professors teaching at residential universities. These five faculties have developed and organised their research and teaching in the same way as this is being done at other universities in our country. This is obligatory, as we have to comply with the same university *laws and regulations*.

But it is also advantageous for the students when they want to change from our university to another and vice versa.

It would be wrong and unwise to conceal from our critical observers that the way in which these faculties develop their teaching is strongly influenced and conditioned by tradition. Although we are a young university, this tradition was carried over from the other universities of our country by our 56 Professors and partly also by their more than 20 assistants. In some of our universities, the teaching tradition can be traced back to more than 400 or even 500 years. It is, in fact, an objectivation of the teaching experience of many generations which creates a feeling of security in the Professors and the faculties responsible for teaching and which may be the cause of their particular sense of confidence and assurance in this field. I believe that we need this particular sense of confidence and assurance also in a distance university in order to be successful. Therefore, the importance of tradition is stressed—as far as the content of academic instruction and the organisation of research is concerned. This is also one of the reasons why the Fernuniversität did not establish the *course team* in which, according to a rumour, the subject matter specialists sit together with media specialists and experts in testing on equal terms to develop a new course. It is solely the *individual Professor* who is responsible for his course. We believe that his responsibility cannot be divided. Thus, it is the individual Professor's obligation to plan, develop and evaluate his courses. He is given *autonomy* and *authority* to get his most important job done. His knowledge and intuition, his sagacity and inventive mind, his creativity and experiences give the course developed by him a personal quality, as well, of course, as his errors, mistakes and perhaps also his dullness. He picks the fruits of his endeavours and has to take the blame for his failure which might spoil his reputation. This has caused our Professors to put all their professional skill and energy into course writing and course development. Thus, our courses have become the strongest feature of our instructional system.

How can the contents of these courses, however, be imparted to our students who, as a rule, have to work for a living in all parts of the Federal Republic of Germany and also abroad? We did not have the possibility of a close cooperation between Radio and Television Corporations like the Open University in the UK because of legal, institutional and financial difficulties.

There was a plan to establish a Television University in our country in 1969/70. But this was turned down by the Professors and students of the other universities. There was the general feeling in those years that at such a new Tele-University the *transmission* of knowledge would become much more important than the *production* of knowledge. And all the academics in our country believed that the form of dissemination was only secondary.

Because of so many difficulties the Fernuniversität could develop only a very modest cooperation with one of the TV Corporations, which now regularly reports about our university and its activities but is not involved in the actual teaching. So, we had to design a media system of our own.

The main means of communication for the teaching Professor is the printed course material. Fortunately, the printed book has been a well established and well accepted medium at our universities for centuries. Furthermore, you can also argue that the abstractness of the written language might lend itself more easily to the teaching of abstract scientific contents than, for instance, the image on a TV screen which presents concrete phenomena and live situations. The more abstract you get in your academic teaching, the more adequate the printed word might become and, hence, the more conducive it might be to the learning of abstract thinking.

In using printed course material as our main medium, our university was, however, already confronted with technological innovations to a high degree, as printing, storing and dispatching this material is indeed a considerable technological process alien to a university so far, but influencing not only the work of the management and administration but also of the faculties and the individual Professors.

But then the work of our Professors became even more demanding: also, supplementary media, mainly audio cassettes and video cassettes and new forms of teaching and tutoring to our 36 study centres had to be developed, the tests for computer-marked assignments and for tutor-marked assignments had to be prepared, a telephone service had to be organised for the students seeking detailed information. The Professors and their assistants, reassured in what to teach, devoted themselves to the problem of how to teach.

I cannot dwell on all these elements and wish to describe only those which require considerable technological innovation; namely (a) audio-and video cassettes, (b) the computer centre, (c) computerized counselling, and (d) interactive videotex.

(a) Audio-and Video Cassettes

The *audio-cassette* was included in our teaching-learning system because in 1975, when our university started, most of our students owned a tape-recorder, a medium which was then technically perfect and relatively cheap. We considered it as an *additional, supplementary* medium which is used only where it can carry special teaching functions. We, for instance, found out that our students cannot pick up the particular language of the mathematicians from the printed course material. Therefore, special audio cassettes were developed to teach, say the pronunciation of the many Greek symbols used in developing mathematical operations. Quite obviously, distance students must learn and practise the pronunciation of the scientific vernacular of the discipline they study in order to be able to take part in discussions. Knowledge does not mean anything if it cannot be communicated. Furthermore, we found that lectures and discussions sounded more authentic when recorded on audio or video tape and that it is easier for the students to identify themselves with their teachers or other students. Since our supplementary *video cassettes* are much more expensive than the audio tapes, they can be viewed at our study centres only. Our Institute for the Development of Distance Teaching likes to produce video cassettes when the evaluation reports indicate that there is a serious difficulty for students to comprehend the text of the printed course material. Then, quite often, a special video film is developed in which the Professor or tutor explains the problem by means of graphs and animation sequences, expert interviews, comments of the author of the printed course, and real life illustrations of the problem. Sometimes, the students are asked to do a short exercise while viewing the film in order to activate their interest, to guide their attention and facilitate their learning in a special way.

Our first experimentation in comparing video films to printed course material in Economics led us to formulate the following hypotheses:

- Economic concepts formulated in a mathematical language can be learned also by video taped instructions.
- When video is used instead of printed material, higher test scores cannot be expected. But the amount of the time needed to understand the given concept may be shorter— due to simultaneous listening and viewing as well as the use of animation.
- Often, optimising the printed course material by graphics,

illustrations, supplying learning objectives and adequate exercises and structuring the text on the ground of didactic principles and typographic experience, may result in better learning in a shorter time than developing a video film.

— Good learning results in a shorter time could also be achieved by showing a supplementary video cassette *before* the course material is studied—using it as an advanced organiser (Laaser, et al., 1980).

You can easily see that we do not study the teaching possibilities of the audio and video cassettes *per se* but in the narrow framework of our distance teaching and learning system.

(b) Computer Centre

The Fernuniversität is also dependent on the usage of further modern, technological means of communication. Data processing is certainly one of these, for the educational counselling and management would be impossible without it.

Generally speaking, most German universities provide central data processing facilities which support the area of research, teaching, and administration. The large amounts of computer resources required by scientific research often play a dominant role. These areas must also be supported by the computing centre of the Fernuniversität, but a comparison with other universities shows a different weighting of these areas.

The resource requirements for research are the same. Data processing, in the area of teaching and instruction, provides several possibilities for directly supporting the study system—for example, through systems such as LOTSE and SMA which provide machine correction and grading services for student assignments. Models for computer-assisted instruction (CAI), although practically difficult to implement, also belong to this category. A special problem encountered at the Fernuniversität is the provision of a means for direct usage for the computer by students; for example, those taking courses in programming.

Data processing is essential for the support of administrative activities connected with the studies system. Applications range from purely administrative, such as student record-keeping and management, to those of a more informational character, such as providing students with correct and up-to-date information about activities at the Fernuniversität. Nearly half the capacity of our two IBM-Computers 3031 is needed for performing these functions.

Let me illustrate the work of the computer centre by reporting about one of its didactical functions: the *marking of assignments*.

As early as 1976, a project of the Fernuniversität was set up to develop and introduce computer-scorable tests and examinations in order to provide a fast service giving students feedback in their learning progress (so-called LOTSE system). At present, about one-third of the diagnostic tests to be marked are computer scorable, varying in amount from one faculty to another.

At the beginning of his studies, the student receives an instruction leaflet with a number of forms, which are specially printed, to be read by an optical mark reader. After answering the questions in his text booklet, the student transfers his answers on one of these forms and sends it to the university, where it is usually processed on receipt of the answer sheet; the data being stored for further analysis.

As feedback, the student receives a detailed *computer-printed letter* which contains information about which answers are correct or wrong, the fraction of correct responses and the total responses, some comments on various groups of items to specific topics, reference to certain parts of the study material if the results are poor, motivational comments to the relevance of the examined objectives for further studies, etc. A few weeks later, in addition to the immediate computer scoring, the student receives a *score distribution diagram* where he/she can see the results of every student within a certain course.

The LOTSE system includes a number of various item-types and scoring-procedures; the most widely used are multiple-choice, integer and decimal answers. As the test results are related to a previously defined criterion (e.g. 50 per cent of the maximal score to be obtained) the assignments can be defined as criterion referenced diagnostic tests.

For the improvement and development of the test booklet, an assignment assessment group, within the Fernuniversität, reviews the test items with the aid of psychometric methods (item analysis, computation of various statistical indices for validity, reliability, discrimination, diagnostical valence, etc.).

Since the introduction of the system in December 1977 more than 150,000 answer sheets have been processed by the LOTSE system. In the academic year 1982/83 about 170 test booklets for machine-scorable assignments were printed. A number of instruction leaflets for item-authors and students are available, also some detailed reports for interested colleagues in the field.

(c) Computerised Counselling

Among the thousands of persons interested in studying at the Fernuniversität, there are many who do not know whether they should or should not enrol. The small number of professional counsellors we have been able to employ so far cannot possibly cope with all of them.

We tried to deal with this problem by means of a special project which aimed at supplying the people interested in becoming students of our university with relevant detailed data which can be helpful in their coming to a decision in their specific personal situations. How could we select the relevant data in each individual case and make it available? By developing a programme for *mass counselling* and employing *computer technology*.

Before enrolling with the Fernuniversität, every student-to-be has the chance to order a pre-course entitled *'How to study'*that was developed five years ago and has been revised several times. The assignments are somewhat different from the usual courses. We ask the client to answer a set of questions about his life situation, his study motives, learning habits, etc. These questions are a vital step towards our goal of having the client initiate a kind of self-examination with respect to studying. We do not want to judge the client's motives, we want them to understand their own motives.

We offer a counselling service by mail if the client has answered social, motivational, situational and even practical questions such as "Do you have a cassette-tape recorder?"

Together with the social data, therefore, we have information in crucial fields of interest for motivation counselling and the prevention of early dropout. The answers are put into our computer and combined with a data bank of counselling texts that are written for each problem area. By matching the information stored in our data bank with the individual situation we generate: 1) a personal computer-letter, and 2) a data file of the answer-structures for research purposes.

The computer letter is a very simple but effective procedure to select and streamline information according to a client situation. Within one week the client receives a letter that might consist of 5 to 20 text modules commenting on the answers given in the answer sheet. Nearly 96 per cent of the letters are truly individual. Each season we produce some 4000 letters and no two letters are alike.

The use of such a system only makes sense when there is much information on the university's side—e.g. feedback about a personal situation like fear of dropping-out because of overload—that is difficult to find or easy to forget. The information given in the computer letter is meant to correct the "map" the client has of his future endeavour, or to respond in a positive, reinforcing way. Up to 89 per cent of our clients have found such a letter helpful and would like to see this instrument of counselling continued.

The second effect of the project is twofold: each year at an early stage we get information about the structure of our new clientele and secondly, it can be helpful for system evaluation with longitudinal studies of motivation, etc.

Currently, we are working on a sub-project to determine differences in personality traits among our students and between our distant-study students and other relevant groups.

Nobody, of course, will maintain that this type of computerised counselling can be a full substitute for personal meetings of clients and counsellors. In the absence of a sufficiently large number of counsellors it may be, however, very useful. Even if we had enough counsellors in our system it would be advisable to run such a computerised system. It can easily manage all pre-known information about the student so that the counsellor can use more of his time for person-to-person contacts.

I consider this industrialised form of guidance or counselling to be of great importance in any open university system.

(d) Interactive Videotex

Finally, I should like to refer to an experiment we are presently engaged in: the application of the videotex technique (comparable to the British Prestel system) within our distance study system.

The Fernuniversität joined the tests of Bildschirmtext (Btx)—the German Videotex-system—in 1980. At present, we have about 1200 pages of information in the system and 57 of our students are participating in the tests. Moreover, we have videotex-terminals in our Study Centres at Neuss and Berlin.

Our videotex-programme may be divided into general information about the Fernuniversität addressed to the public, and specialised information for our students, the latter being the more important one. Applications are, for instance, fact corrections of mistakes in our written material (in the existing communication system such information often does not reach the students in time) or the solutions of exercises in our LOTSE system (giving the student an immediate feedback on whether or not he achieved the correct solution).

On the other hand, the students may *send* information via videotex to the Fernuniversität. So, for instance, by filling in special videotex-pages, the student may order books from our library just from his home television, and this service is frequently used.

Various other applications are also tested. The new videotex-standard (improved graphics), and the combination of videotex with the central computer of our university in Hagen and intelligent videotex-terminals will offer many additional possibilities, especially in the field of teaching and learning. After all, videotex may well play an important role in the future communication system of the Fernuniversität.

Videotex may also become a new and cost-effective means for providing students with access to the computer. This is the Bildschirmtext videotex service now being field-tested by the Deutsche Bundespost which can be regarded as a type of carrier for teleprocessing. This can be especially useful in the areas mentioned above, as well as allowing for development of such things as a post box system or direct retrieval from the computer of certain course materials by students. The student, using his television set at home and connected by BTX-Computer Networking to the computers of the Fernuniversität, will be provided with all those services which were so far only available to him in the Study Centres equipped with conventional display terminals. All those facilities which a student who sits at a terminal in a computer centre at a conventional university has, may also become available to students at the Fernuniversität, thus removing a disadvantage that has existed in the past. Although complete data are not yet available, we believe that the costs for such a system would be under 10 DM per student hour.

Project BIRD (Bildschirmtext Rechnerverbund für Dialog System) which seeks to develop and test software for dialogue access to the computer using BTX-Computer Networking, will play a vital role in the further development of our university. The first successes were achieved several weeks ago. They indicate that the distance between the student and the university can be overcome by just another medium in practically no time.

How did the Professors of the Fernuniversität react to this impact of innovative technology on academic tradition? Remarkably well.

First of all, they gradually acquired the skill to develop printed course material which is self-instructional. They developed and managed a system of teaching by written exercises and assignments. Then, many of them became skilled in preparing tests to be marked by the computer. They organised a service to deal with students' question via letter and telephone. They made instructional video films and audio tapes. They held seminars with tutors in our study centres in order to make them familiar with their teaching.

I believe, this commitment in the new field can be expected from full-time Professors only. It is true, they did not become educational technologists by performing all these tasks—but they became technological practitioners who habitually like to reflect on their methods of distance teaching, and this is considerable progress in the reform of university study.

In achieving this, the activities of our Centre for the Development of Distance Teaching Material must be mentioned. Here, the experts in the use of media, in the didactical structuring of printed teaching material and in tests and evaluation are available for advising and helping the Professors in their developmental work. Some Professors profit a great deal from this centre, others less and still others only indirectly. Nevertheless, every course unit is evaluated in this centre and every professor is given the results of his course evaluation, but then it is entirely up to him to decide whether or not he prefers to accept the advice and recommendations given for improving his course units. This may be one of the reasons for the growing interest of our professors in problems of educational technology. Nobody need be afraid that the academic soundness of the courses might suffer because of their treatment by educational technologists.

Furthermore, we have a Central Institute for Distance Study Research where problems of distance study are dealt with in a more scholarly way. The experts of this institute are also always ready for consultation. In such a way, we have tried to bring about a balanced cooperation between academic tradition and technological innovation.

This balance of these two important elements of our university's achievements can also be seen from its organisational set-up. It is basically traditional, but nearly everywhere each section helps to perform new and so far unknown tasks in addition to the tasks typical for every university in our country. Our university has been successful in fitting the two activities—so alien to each other—

together. What started as a balanced mixture of tradition and innovation is now in the process of becoming more and more integrated. A new type of university developed in this way and a new type of professor emerged as well.

Trying to think of all possibilities you might theoretically have in merging academic tradition and innovative technology for the purpose of distance teaching, it is possible to describe two *extreme* organisational models: One extreme would be a traditional university using as little educational technology as possible. And the other could be a highly developed media system as, for instance, a radio and television corporation distributing academic knowledge with as little contact with a university as possible. You can see that the Fernuniversität is somewhere in the middle, between these extremes, although it derives its professional identity and organisational pattern from the first extreme model of a distance university. Seemingly, under the conditions of our country this way has provided good possibilities to optimise our teaching and learning with regard to their more traditional aspects as well as to their technological aspects.

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7

DISTANCE EDUCATION : THE EXPERIENCES OF ANDHRA PRADESH OPEN UNIVERSITY

C. NARAYANA REDDY

Introduction

The State of Andhra Pradesh which came into existence in 1956 as a result of the States' re-organisation, is one of the largest States in the country. To this State goes the credit of starting the first open university in the country.

At the national level, the idea of starting an open university had been under consideration since December 1970. It was in that year that the Union Ministry of Education organised a seminar under the chairmanship of Prof. D.S. Kothari with its participants drawn from the UNESCO and several countries including the UK, the USA and Japan. Later, in the 1970s, a project report was prepared by a committee under the chairmanship of Mr. G. Parthasarathi appointed by the Government of India. At the state level, in 1978, the then Education Minister of Andhra Pradesh, based on a discussion with Prof. G. Ram Reddy who was then the Vice-Chancellor of Osmania University, evinced a keen interest in the concept of an open university. He asked the latter who was scheduled to go to the UK, to visit the British Open University and submit a report. On his return from the UK, Prof. Reddy gave him a note on its significant features. But as there had been no tangible governmental move in that regard, it was proposed to set up an autonomous College of Education to be run by Osmania University. The proposal was accepted by the university's Syndicate and a committee was appointed to consider its feasibility. At the instance of Osmania University a consultancy report was prepared by Mr. Greville Rumble of the British Open University. The proposed college was to offer the distance education programmes with its successful students receiving their degrees from the Osmania University.

While the work on this college project was going on, there was a change in the Ministry at the State level in 1982 and the then

Education Minister Mr. Bhavanam Venkatram, became the Chief Minister of the State. He showed a renewed interest in the distance education system and appointed a committee with Prof. G. Ram Reddy as its chairman to study the possibility of starting an open university with the stipulation that the committee should submit its report within two months of its appointment. The committee consisted of distinguished educator-administrators like Prof. B.R. Rao, former Vice-Chairman of the UGC; Prof. B. Sarveshwar Rao, former Vice-Chancellor of Nagarjuna University; Mr. M.R. Appa Rao, former Vice-Chancellor of Andhra University; Mr. N. Chandra Mouli Reddy, Education Secretary and the Director of Higher Education as its member-convenor. The committee submitted its report to the Government and a bill based on it was introduced in the Andhra Pradesh Legislature which was passed by the Legislature in August 1982. Both the Chief Minister and the then Education Minister, Mr. B. Kesava Rao, fully supported its establishment. And passing the bill by the Legislature in such record time would not have been possible but for the appreciation by all the political parties of the State of its significance to the educational advancement of the people of the State. The Andhra Pradesh Open University (APOU) was inaugurated by the President of India on 26 August, 1982. Prof. Ram Reddy was appointed its Vice-Chancellor on 18 November, 1982. Thus, the first Indian open university came into being, disclosing a new vista of possibilities in Indian education. The university was singularly fortunate in getting full political support under the Congress Government headed by Mr. Vijaya Bhaskar Reddy and later under the Telugu Desam headed by Mr. N.T. Rama Rao. It shows that the policy makers are aware of the potential of distance education.

Objectives

The objectives of the APOU are:

- to provide educational opportunities to those who could not, for one reason or another, take advantage of those offered by the other institutions of higher learning;
- to realise equality of educational opportunity for as large a number of people as possible, including those in employment, housewives and other adults who wish to upgrade their education or pursue their studies in areas of their own choosing;

- to provide flexibility with regard to eligibility for enrolment, age of entry, choice of courses, methods of learning, conduct of examinations and implementation of educational programmes;
- to formulate programmes complementary to those of the existing universities in the State so as to maintain the highest standards on a par with those of the best universities in the country;
- to promote integration within the State through its policies and programmes;
- to offer degree courses and non-degree certificate courses for the benefit of the working population in various fields and those who wish to enrich their lives by studying subjects of cultural or aesthetic values; and
- to make provision for research and for the advancement and dissemination of knowledge.

Organisational Structure

The organisational structure of the university does not radically differ from that of the universities in the State. The few changes that distinguish it from the others are dictated by its distinctive functional character. The Governor of Andhra Pradesh is its ex-officio Chancellor, as in the case of other universities. The Vice-Chancellor is its academic and administrative head as in any other university. He is appointed for a three-year term by the Chancellor, from among those recommended by a committee specially appointed for that purpose and is eligible for a second term. All the executive authority is vested in the Executive Council headed by the Vice-Chancellor. The Academic Council, like that of any conventional university, deals with all academic matters including policies and programmes. The APOU has on its staff the Registrar, Deans of Faculties, Heads of Departments and the Finance Officer. The university has a Planning Board consisting of persons of high academic standing nominated by the Chancellor and presided over by the Vice-Chancellor. It is charged with the responsibility of monitoring the development of the university and ascertaining whether it accords with what is postulated by its objectives. It has a statutory right to advise the Executive Council and the Academic Council on any academic matter or issue. But in no other university is there any provision for the appointment of Directors comparable in rank to the Pro-Vice-Chancellor of a university. Such a provision in the APOU Act has been made to meet the need for utmost coordination and cohesion of various activities of the university.

Again, the APOU cannot be classified as a unitary or an affiliating university as it functions through a network of Study Centres set up in existing colleges affiliated to the other universities in the State. Indeed, demographically and to some extent structurally, it stands alone, which make its tasks all the more challenging.

Course Structure

Flexibility and willingness to experiment and innovate characterise the functioning of the APOU. This helps in overcoming the rigidity generally encountered in the courses of study offered by conventional universities. The APOU has planned to introduce courses in a phased manner. Starting with undergraduate courses leading to the B.A., B.Sc. and B.Com. degrees, it has instituted post-graduate diploma courses in public accounting and public relations, each of which is the first of its kind to be offered in the country. The APOU's introduction of the P.G. diploma course in public accounting marks the coming together of a university and the government for the first time to design a job-oriented course. And, what is more, it is a case of the user involved in the fashioning of the product, since its course content is specifically designed to meet the demands of the maintenance of government accounts. The Comptroller and Auditor-General of India, who inaugurated the course has recognised it as a qualification for recruitment to posts of auditors in his offices. This, it is hoped, will lead to such significant cooperation between the university and user organisations in our country.

Again, the starting of post-graduate diploma course in public relations exemplifies the innovative character of the university. With the increasing importance attached to public relations in industry, trade and even government, such a course acquires added significance. The APOU has the distinction of being the first university in the country to offer a full-fledged course in public relations which forms only a part of the courses in journalism in other universities. The response to it has been so overwhelming that the university proposes to offer other similar professionally useful courses in the future.

In addition to these courses, the university has a bachelor degree course in library and information science for in-service candidates. The fact that it has attracted enrolment of students from all over the country underlines its usefulness and popularity.

The university has plans to introduce shortly M.A., M.Com., and M.Sc. courses and also M. Phil. and Ph.D. programmes. Here also the policy is to start courses in those subjects that are in great demand—subjects like English and Telugu literatures, public administration and political science and bio-chemistry. Preparations are being made to offer the MBA course also for in-service candidates, a post-graduate diploma course in translation and P.G. diploma course in computer science and other specialised courses such as marketing and salesmanship.

Some of the important features of the undergraduate programmes are:

1. The introduction of foundation courses, core and applied courses. The foundation courses in modern Indian language (Telugu, Hindi and Urdu), English, science and technology and Social Sciences are compulsory and common to all the students of B.A., B.Com. and B.Sc. This conforms to the UGC's policy framework in this regard, intended to enable the students to acquire an integrated view of knowledge. However, the foundation language courses are designed to improve the communicative skills of a student, not to impart knowledge of literature or promote his literary sensibility. The foundation courses in social sciences and science and technology are intended to provide a broad understanding of nature, men and society and man's efforts to improve his situation. Thus, we have in the first year:

   Course 1 : Modern Indian Language (Telugu/Hindi/Urdu)
   Course 2 : English
   Course 3 : Science and Technology
   Course 4 : Social Science.

In the 2nd and 3rd years of the undergraduate programmes, the student is required to study three subjects of his choice. The courses to be studied in the 2nd year cover the 'core' area of the subject and those of 3rd year are applied courses which allow specialisation. Indeed, the APOU takes credit for providing for specialisation even at the undergraduate level. For instance, the B.Com course provides specialisation in accountancy and secretarial practice. This is done with a view to help students acquire not only a degree for the pursuit of post-graduate studies but also a terminal degree useful for employment or professional advancement.

The most significant feature of the undergraduate programme is the flexibility in the choice of subjects and flexible designs in learning. Of the three optional subjects which a student is required to study in the 2nd and 3rd years, at least two should be from the faculty in which he seeks to acquire his degree. The third subject can be from any of the other faculty. For instance, a candidate for the B.Sc. degree has to choose two subjects from those listed under the faculty of Science and is free to choose the third one from those listed under any other faculty. The university also provides guidance to the student in the matter of choice of subjects.

The subjects offered at present in each of the faculties of Arts (humanities, social sciences), Science and Commerce are as follows:

Faculty of Arts (Humanities and Social Sciences)

Economics
English Literature
History
Political Science
Public Administration
Sociology
Telugu Literature.

Faculty of Commerce

GROUP—A	Business Organisation and Management
	Accountancy
	Advanced Accounts
	Auditing
GROUP—B	Business Statistics
	Business Law
	Company Accounts
	Corporation and Industrial Finance.
GROUP—C	Principles of Economics and Economic Development
	Money and Banking (Theory and Practice)
	Cost Accountancy
	Income Tax
	OR
	Office Organisation and Management
	Principles of Management.

Faculty of Science

Physics
Chemistry
Mathematics
Botany
Zoology
Geology.

Efforts are being made to offer vocationalised and specialised courses as applied courses under the 3rd year programme. These are identified by the university in consultation with the experts. They are so designed as to meet the demands of self-employment or vocational advancement. Students choosing science subjects will have one practical paper in each subject at the end of the 2nd and 3rd years respectively.

The APOU at present offers 68 course/papers at the undergraduate level through English and Telugu media and 18 courses at the post-graduate level. This number will go up considerably in 1988 when the post-graduate and other courses as referred to are introduced.

Preparation of Course Material

The student of the APOU has the advantage of receiving course materials prepared by experts mostly drawn from outside the university. They are not guides, notes or textbooks but are learning aids having a format that helps him to acquire knowledge of his subject step by step. The courses and lessons in each subject are planned by the expert committee. The lessons are prepared by a team consisting of a subject editor, a few course writers, a language editor and a coordinator who is a full-time member of the university's faculty. The subject editor discusses the plan of writing lessons with the course writers. He examines the manuscript of the lesson before sending it to the language editor whose duty it is to see that the language used does not create difficulties for the student. After the language editor's scrutiny, the manuscript comes to the coordinator who in turn sends it for printing. This is the procedure followed at present in the university with regard to getting the lessons ready for printing.

The printing work of the course material is done by external commercial printing presses. The university does not, at present, have a printing press of its own but proposes to acquire one in the near future. Though the print medium is the principal one employed for study materials, the use of audio-visual media is necessary to strengthen distance education. The All India Radio has given the university time to broadcast our lessons which we have been doing for the past two years. We plan to telecast our lessons, if and when possible, since the Doordarshan (the national TV broadcast establishment), at present, has limited viewing time at its disposal. The university is, therefore, obliged to go in for video cassette lessons. An audio-visual unit has been set up which has produced lessons on selected topics identified and prepared by experts which are made available to students at our study centres. This university has to depend on the overworked All India Radio and Doordarshan which cannot be expected to allot peak listening and viewing times to such a small specialist audience as our students.

Instructional Methods

The university functions through its study centres located in existing colleges which at present number 50. Ten of them are in Hyderabad-Secunderabad area including one set up at the Hyderabad Central Jail for 18 prisoner candidates and of the rest, there is one in each district of the State. The study centres are the university's point of contact with its students who, on enrolment in the university, are admitted into them according to their preference by the university's decision. The study centre is a multi-purpose one, since it organises counselling and contact programmes on certain days in the evening and also on sundays. The students receive guidance there from part-time counsellors or academic guides drawn generally from the teaching staff of the college in which the centre is located. Their work is supervised by a coordinator and the principal of the college. The coordinator and the counsellors plan the programmes which provide for face-to-face interaction between the teacher and the student, which is necessary to overcome study problems. Each study centre is equipped with audio-visual equipment such as a video cassette recorder, TV set and tape recorder and also a small library.

Once a year, summer schools are organised to offer intensive coaching to the students at selected study centres in which experts participate. It is hoped that the APOU will in future, be able to provide telephone tuition or teletext services. In choosing educational media, we had necessarily to adopt a realistic approach taking into account such factors as 'accessibility', 'convenience' and 'academic control'.

Admission Policy

In consonance with the concept of the open education system, the APOU has adopted an admission policy which prescribes no restrictions based on sex, age, residential situation or any other that obtain in formal universities with regard to the B.A. and B.Com. degree courses. Students are admitted to those courses on passing an eligibility test comprising three papers—modern Indian language (Telugu, Hindi or Urdu), English and general knowledge. The first eligibility test was conducted in June 1983. Out of 8,300 registered candidates, 7,986 appeared and 56.7 per cent of them passed the test. The corresponding figures for the following years are: (Table 7.1)

ELIGIBILITY **Table 7.1**

	Registered	*Appeared*	*% of passes*
1984	23,458	21,427	51.7
1985	27,629	24,736	61.04
1986	33,442	30,701	56.00
1987	30,647	27,584	59.00

It is only with regard to B.Sc. degree course that admission is open only to those who have passed the Intermediate or equivalent examination with science subjects. However, a student of the B.A. or the B.Com. degree course is allowed to join the B.Sc. course in the 2nd year if he (i) is an employee of an educational, industrial, research and such other organisation or department; (ii) is engaged in scientific and technological activities and (iii) passes a test of Intermediate standard conducted by the APOU choosing two of the following three papers:

Paper I : Mathematics
Paper II : Physical Sciences (Physics & Chemistry)
Paper III : Biological Sciences (Botany & Zoology)

Thus, it may be seen that the university's admission policy is most open in character, calculated to enable a student to choose his own combination of subjects of study and not those prescribed by the university.

Student Enrolment and Performance

The rising popularity of the APOU is indicated by the upward trend of its student enrolment. Starting in 1983 with 6,406 students admitted into B.A., B.Sc. and B.Com. courses, it has on its rolls in 1987 33,817 students admitted to its undergraduate courses, P.G. Diploma Courses in Public Accounting and Public Relations and Bachelor Degree Course in Library and Information Science. During 1986-87, 19,886 candidates joined the undergraduate courses. Of this, 12,460 were from the districts and 7,426 were from the cities. The sex-wise break-up of the students shows that 14,192 were males and 5,694, females.

The analysis of the eligibility test of May 1986, in which 30,701 appeared shows that 23,000 were males and 7,698, females. Of these 5,611 had no formal education; 4,095 had studied up to matriculation, 20,995 had completed matriculation and 17,129 passed in the test which is about 56 per cent. The persons who had passed matriculation were the ones who were very successful, i.e., 61 per cent of them passed the test. But the performance of the others was not bad—48 per cent of those who had no formal education and 42 per cent of the people who studied up to matriculation passed the test.

Looking at the marital status of those who took the entrance examination and passed it, we find that 60 per cent of the married people passed their test, whereas 52 per cent of the umarried were able to pass. The best performance in the test was of those persons who were over 41 years of age. In the case of those who were in the age group of 46-50, the pass percentage was 87 and of those in the age group of 50-60, it was 92. Indeed, there has been an increasing influx of women candidates into the university which points to their keenness to avail themselves of the opportunity afforded by the APOU.

The university publishes a bi-monthly house journal *OPVARSITY NEWS* which has received letters from disabled and blind students, artistes, politicians, including an ex-MLA, expressing their gratitude to the university for enabling them to pursue their studies. The university has admitted 18 prisoners of whom 14 are in the 1st year, three in the 2nd year and one in the 3rd year and opened a Study Centre for them in their jail. The prisoners consider it as a light in their darkened lives.

Evaluation System

Evaluation in the APOU is of two kinds: 'Response sheets' and regular university examinations at the end of each year. The 'response sheets' signify the assignments carried out by the student and examined by his counsellors. This makes for continuous assessment of the student's comprehension of the subject which is necessary in the case of an independent learner or distance learner. This corresponds to the 'internal assessment' which was followed until recently in the other universities of the State. The student of APOU, like any other university student; has to appear for the year-end university examination in each subject for which the university appoints examiners.

It is gratifying that the performance of the students at the university examinations held so far, compares favourably with that of their counterparts in other universities of the State from which the examiners are drawn.

There is a need for setting up an Evaluation Research Unit to collect data from sources like assessments by counsellors, observation by selected groups of students, computer tests and longitudinal studies of the performance of students at university examinations. Such a unit will be helpful for the preparation of briefs for the use of course teams.

Finances

The structure of the university's finances reflects the singular functions of the university which are unlike those of any conventional university. No other university has such a large printing bill as the APOU which relies mainly on the print medium for instruction to its students—inevitable in distance education. Again, the expenditure on salaries and establishment of the university is much less than that of any other university of comparable size and scale of operation.

The university has been receiving an annual recurring government grant of Rs. 50 lakhs for the past few years pending the fixation of its block grant. In addition, the university has been receiving a non-recurring government grant of about Rs. 57 lakhs.

The budget for the year 1986-87 was as follows:

Receipts		Rs.
Grants		62,50,000
Fees		2,03,12,900
Endowments		12,500
Miscellaneous revenue receipts		5,46,000
Other receipts		22,000
	Total	2,71,23,600

The pattern of expenditure was as follows:

Expenditure	Rs.
Administration	83,84,200
Course material	46,05,800
Audio-video programmes	26,46,100
Library	11,65,200
Study centres;	56,20,600
Examinations	31,04,200
	2,55,26,100

It is gratifying that the university's printed course books are being made use of by students of other universities which testifies to their usefulness and even their excellence. The university is planning to market them in order to make them available on as large a scale as possible. It may also put on sale its lessons recorded on audio tapes and video cassettes, which have been widely appreciated. If this is done, the university may derive some recurring income from the sale of its productions.

Conclusion

The enthusiastic public reception of the establishment of the APOU and the phenomenal increase in the demand for admission into it, are indicative of the general acceptance of the open education system in the State. Both the State Government and the public expect it to relieve the pressure on the other universities in the State which have not been able to accommodate all those seeking admission in them. Its unique system of operating through study centres established in existing colleges has resulted in the utilisation of their infrastructural facilities, acquired at great cost, to the fullest extent possible. This should prove welcome in that their 'idle capacity' is being availed of in the national interest just as the unused capacity of industrial plants is sought to be made use of.

India, like any other developing country, has to tackle formidable problems of national reconstruction to meet the rising expectations of its people. Education, on as large a scale as possible, is the key to the success of its endeavours. Large numbers of people in our country seek education, but are not able to pursue their studies in conventional institutions for one reason or another. Those who are employed seek it for professional advancement or fulfilment of their educational aspirations. If they are to be given an opportunity to continue their education, there is no alternative to open education. We are all aware of the limitations of the formal education system and the disabilities to which the formal universities are subject to. So we have no choice but to strengthen the non-formal system of education. Not long ago, the UNESCO commission on Education pointed out that the concept of education, subject to limitations of time (school age) and space (school campus), should be given up and a part of education activity deformalised and replaced by flexible, diversified models. "The closed education system must be made open" just as there should be a transition from a closed society to an open one.

8

INDIRA GANDHI NATIONAL OPEN UNIVERSITY: ITS ROLE IN HIGHER EDUCATION

G. RAM REDDY

Education is a vital input in modernisation and development. A democratic society which lays stress on egalitarianism and social justice, generates irresistible pressure for education. Any system of education which is elitist and inaccessible to many, becomes incongruous in such a polity. That education in India was for long not within the reach of a large majority of the people is a point which does not need much elaboration. However, what is paradoxical is that since independence while there has been tremendous expansion in education it has still left many outside the system, as we shall discuss in this paper.

The UNESCO Commission on Education, commenting on the need and relevance of education, has rightly observed that educational institutions are a decisive factor in training men to contribute to the development of society, to play an active part in life and in properly preparing men for work (UNESCO, 1972). Spread of education, therefore, is a necessity both for modernisation and for sustaining the democratic polity. For, education brings awareness and enables man "to be himself" and "to become himself". Today, modern communication technology has placed at our disposal several tools which can be exploited for spreading education and providing quality instruction. It is against this background of necessity of spreading innovative higher education through distance education, by making use of communication technologies for this purpose, that we propose to describe the role of the Indira Gandhi National Open University

The formal system

Realising the importance of education in national development, India has been expanding the frontiers of education to provide access to large sections of our society. This is evident from the following impressive statistics. In 1951, there were only 22 universities in India; today, there are about 160. The number of colleges has gone up from 695 to 5,482 and the number of students in higher education has increased from 17,000 to 3,538,000. The expenditure on education, in general, has risen from Rs 1140 million in 1950-51 to Rs 60,000 million in 1984-85, which represents about three per cent of the GNP. Despite such massive expansion, unparalleled in the history of Indian education, it is unable to meet the requirements. In many colleges, adequate infrastructural facilities do not exist, standards are low and several of them are non-viable. Thus, we find that though there has been a quantitative expansion, qualitatively there are wide variations in the standards of educational institutions.

The approach to education in India has been mainly through the formal system. As a result, the system has remained inadequate to meet the national needs and has also produced several imbalances. The well known criticisms against the existing educational system are that it is: (a) elitist; (b) rigid; and (c) expensive. Obviously, such a system would not be able to meet the demands of a changing society. The formal system is based on the following four assumptions: (a) there should be full-time teachers to teach; (b) the students must belong to certain age groups and be full-time learners; (c) instruction can take place only in specially earmarked classrooms; and (d) instruction has to be face-to-face. The system would leave out all those who are not covered by them. So long as the system rigidly follows them it discriminates against those sections of society which cannot afford full-time learning.

Inadequacies, rigidities and limitations of the formal system have aptly been described by the then Minister of Education Mr. K.C. Pant in his Statement of Objects and Reasons for the establishment of the Indira Gandhi National Open University while introducing the Bill in the Rajya Sabha. He said: "Despite the tremendous expansion of the formal system of higher education since Independence, the pressure on the system is continuously increasing. Indeed, the system has not been able to provide an effective means to equalise educational opportunities. The rigidities of the system requiring, among the others, attendance in classrooms have been a disincentive to many learners. Moreover, the combinations of subjects are inflexible and are often not relevant to the needs of the learners. This has resulted in a pronounced mismatch between the contents of most programmes and the needs of the development sectors" (Pant, 1985).

With a view to meeting the demands of higher education, some universities in the country have provided the system of external examinations. Under this system, students are permitted to take the university examinations, if they are otherwise eligible. The university, however, does not take any responsibility either to teach or guide the students. As a result, the students have to prepare for the examinations on their own or depend upon the tutorial institutions which provide cheap and inadequate literature.

Correspondence Education

To overcome this problem of demand and make more facilities available, the University Grants Commission, on the recommendations of the Kothari Committee (1963) initiated steps to start institutions of non-formal or distance education in the existing universities. Such facilities, the committee felt, would equalise educational opportunities, apart from providing education effectively and economically. The first School of Correspondence Courses was established as a part of Delhi University with jurisdiction all over the country. In 1986, 38 universities were offering educational facilities through correspondence courses. During the last two decades, they have been able to provide educational opportunities to many. But not much has been done to strengthen and improve them during this period.

As a result, these institutes suffer from several limitations. They are as follows:

1. They are treated as appendages to the conventional universities. They do not have freedom either in designing their courses or in incurring expenditure. Decision making is totally in the hands of others;
2. Their courses, regulations regarding entry, examinations, etc., are the same as those stipulated for regular students. Their courses suffer from the same rigidities as those of the courses designed for regular students;
3. In most institutes, the only method of instruction is through correspondence material;
4. The academics and administrators of the conventional system treat the correspondence education as a second-class system.

Because of these limitations, the system could not be effective and has remained a weak partner in the development of higher education in the country.

Open University: Early efforts

Realising the limitations of the formal education system and with a view to using the modern communication technology to spread education, there was a search for alternatives. The establishment of the Open University in the UK, the first strong distance teaching university imparting higher education, provided the much needed impetus to educational planners and policy makers. Policy makers began to consider the desirability of establishing such a university in India to mitigate some of the problems confronting the educational system. In 1970, which was declared as an International Education Year, the Ministry of Education organised a seminar on the Open University, to consider its establishment in the country. An interesting feature of this seminar was that it was co-sponsored by the Ministry of Information and Broadcasting and the University Grants Commission. Professor V.K.R.V Rao, the then Minister of Education, inaugurating the seminar felt that the open university using the latest educational and communication technology should offer quality education to a "much larger body of population which remains outside the so-called university system". The seminar recommended the establishment of an open university in the country and made several suggestions relating to its objectives, organisation, finances and methods of work. It also recommended the constitution of a study group to work out details before the establishment of such a university.

Following the recommendation of the seminar, the Government of India appointed an eight-member working group with G. Parthasarathi (1974), the then Vice-Chancellor of Jawaharlal Nehru University, as chairman. The group, after surveying the scene of higher education in the country, observed:

> In a situation of this type, where the expansion of enrolments in higher education continues at a terrific pace and where available resources in terms of men and money are limited, one obvious solution, if proper standards are to be maintained and the demand for higher education for different sections of the people is to be met, is to adopt the open university system with its provision of higher education on a part-time or own-time basis. The group, therefore, recommends that the Government of India establish, as early as possible, an open university by an act of Parliament. The university should have jurisdiction over the entire country so that, when it is fully developed, any student, even in

the remotest corner of the country can have access to its instruction and degrees.

The working group which submitted its report in 1974 made several suggestions about the nature, organisation and financial aspects of the university. It is believed that a draft bill was prepared for the establishment of a national open university but for inexplicable reasons nothing was heard about it subsequently. Later, in 1982, the committee to enquire into the working of central universities under the chairmanship of Dr. (Mrs.) Madhuri R. Shah recommended that practical steps should be taken for creating a national open university without any delay.

Many of those who are associated with correspondence education in the country also began to feel the need for a central organisation to coordinate the working of the correspondence education system in the country. They advocated the establishment of a national institute of distance education or a national open university (Dutt, 1984 and Singh, 1984).

Open Universities in the States

While these efforts for the establishment of a national open university were on, the Government of Andhra Pradesh considered a proposal to start an open university in the State as early as 1978 (Reddy, 1982). However, the proposal was not given any practical shape. Meanwhile, the Osmania University initiated proposals to start on Open Education College to strengthen its distance education system. The college, though a part of the university, was to have full autonomy and the university was only to award degrees. At about the time the college was to be established, the new Chief Minister of Andhra Pradesh, Mr. Bhavanam Venkatram, revived the idea of establishing an open university and appointed in 1982, a committee to examine the proposal (1982). This committee recommended the establishment of an open university in the State to provide wider access to higher education to the adult population in the State, for upgrading their functional capacities and improving the quality of their lives in the context of broader social and political objectives of equalisation of educational opportunities and the emergence of a new concept of life-long education. Soon after, the wheels of the administration moved very fast and the Andhra Pradesh Open University was inaugurated in August 1982.

National Open University

At the national level, however, the earlier proposals remained on paper and no action was taken on the Parthasarathi committee report and nothing was known about the draft bill prepared. The idea was again revived in 1983/1984 and the proposal was pursued in the Ministry of Education. The Prime Minister, Mr. Rajiv Gandhi, in his first broadcast to the nation in January 1985, gave expression to this in the form of a policy statement when he announced the establishment of a national open university as a part of the new educational policy. In pursuance of this, a committee was constituted by the Ministry of Education, with eminent educationists. The committee, apart from preparing a draft bill, submitted a project report, detailing the various aspects relating to the establishment of a National Open University, like the objectives, courses to be offered, staffing pattern, governance, relations with broadcasting media, financial estimate, etc. (Educational Consultants India Ltd., 1985). The Government, committed as it is to strengthening distance education in the country, introduced a Bill in the Parliament immediately. The Indira Gandhi National Open University Bill was passed by both the Houses in August 1985 and the university came into being on 20 September, 1985. Thus, the idea of a National Open University initiated in 1970 became a reality in 1985.

The Indira Gandhi National Open University was established with laudable objectives and its scope is very wide. This is evident from the following provision of the Act:

> "The objects of the university shall be to advance and disseminate learning and knowledge by a diversity of means, including the use of any communication technology, to provide opportunities for higher education to a large segment of the population and to promote the educational well being of the community generally, to encourage the open university and distance education system in the educational pattern of the country and to coordinate and determine the standards in such systems..."(Indira Gandhi National Open University Act, 1985).

The other objectives of the university refer to providing education according to the needs of employment and nation-building activities; to provide facilities to people to upgrade their knowledge and skills; to develop non-formal education as complementary to the system; to promote national integration and to contribute to the integrated development of the human personality through its activities and programmes.

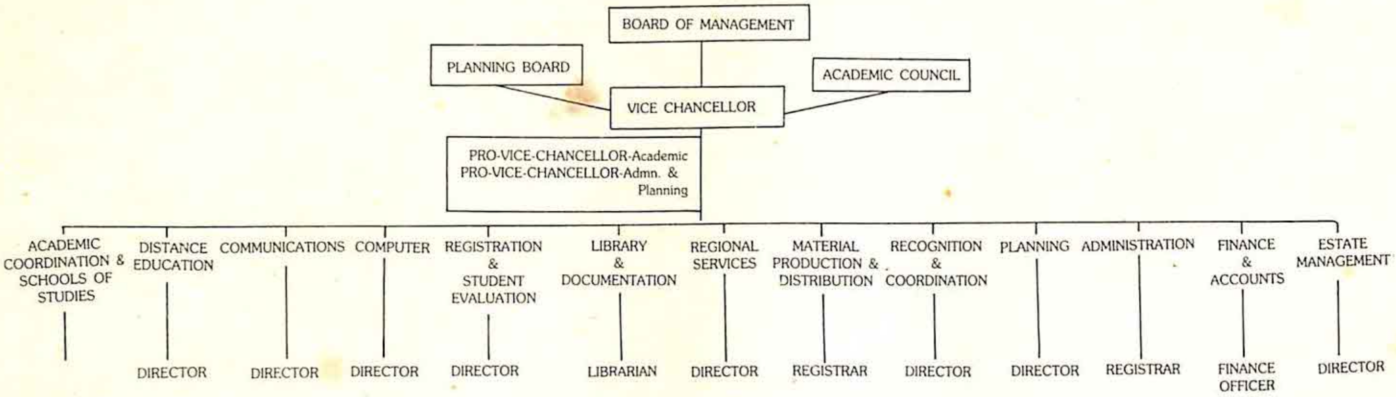
An important feature of the Indira Gandhi National Open University is its jurisdiction. Unlike many conventional universities, its jurisdiction covers the entire Union of India. Though central universities are established as national institutions, some of them began to attract students only from the regions in which they are located; thus losing their all-India character. But the Indira Gandhi National Open University takes education to all parts of the country—urban and rural, and plains and hilly areas. Its organisational network spreads throughout the country. The Act provides for the establishment of Study Centres in different parts of the country depending upon needs and requirements. To coordinate and supervise the working of study centres, there are the regional centres. Viewed from this angle, the Indira Gandhi National Open University has become a national university in both letter and spirit.

Governance

Like the other central universities, the Indira Gandhi National Open University has its academic and administrative bodies. To suit its peculiar needs, a departure has been made in devising certain authorities of the university. An important feature of its organisation is the large measure of flexibility built into it which will enable the university to determine its structure as the need arises. The authorities of the university are: the Board of Management, the Academic Council, the Planning Board, the Finance Committee and the Board of Recognition (The Indira Gandhi National Open University Act, 1985). The academic activities of the university are undertaken by different Schools of studies. No provision has been made for the Court in this university unlike in several other universities. It has been found that the Court has outlived its utility in the university system. This is, in any case, not an innovation, nor a radical departure, as agricultural universities in the country and a few other do not have provision for a Court. The Committee on Central Universities after examining the working of various authorities has recommended the deletion of the provision relating to the Court in all central universities.

The Board of Management is similar to the Executive Council in the central universities. As the nomenclature explains, the Board of Management is the executive authority and has a decisive role in the organisation and working of the university. The Academic Council formulates and monitors the academic programmes of the univer-

I.G.N.O.U. ORGANISATIONAL STRUCTURE



sity. It exercises supervision over all academic policies of the university. The Planning Board is mainly responsible for designing and formulating appropriate plans for the growth and development of the university. It advises the Board of Management and the Academic Council on matters concerning the realisation of objectives for which the university has been established. The Finance Committee concerns itself with financial matters and the Board of Recognition is responsible for its affiliation functions.

The President of India is the Visitor of the University. The officers of the University are the Vice-Chancellor, Pro-Vice-Chancellors, Directors, Registrars and Finance Officer. Unlike in other Central Universities, no provision has been made for a Chancellor in this university. It is found to be superfluous as the functionary has no specific role or responsibility. The procedure for the appointment of the Vice-Chancellor is more or less on the same lines as in other central universities. He is appointed by the Visitor, from a panel of not less than three persons recommended by the committee constituted for the purpose. The committee consists of three members, of whom two are nominated by the Board of Management and one by the Visitor, and the person nominated by the Visitor is the convenor of the committee. The Vice-Chancellor is a whole-time salaried officer and holds office for a term of five years, or until he attains the age of 65, whichever is earlier. He is the ex-officio Chairman of the Board of Management, Academic Council, Planning Board and the Finance Committee. The Vice-Chancellor exercises control over the affairs of the university and will give effect to the decisions of all authorities of the university. He is responsible for the proper maintenance of discipline in the university and related matters.

It is important to note here that provision has been made for more than one Pro-Vice-Chancellor. This is found desirable and necessary as the scope of the activities is very wide, the jurisdictions vast and the method of instruction in the university is different from conventional universities, requiring advanced communication technology, higher supervision, monitoring and proper and constant guidance. The Pro-Vice-Chancellor is appointed by the Board of Management on the recommendation of the Vice-Chancellor. The term of office of the Pro-Vice-Chancellor is decided by the Board of Management, but does not exceed three years. He is, however, eligible for reappointment. The Pro-Vice-Chancellor assists the Vice-Chancellor in respect of such matters as may be specified by the latter from time to time and also exercises such powers and performs such functions as may be delegated to him by the Vice-Chancellor. At the moment, there are two Pro-Vice-Chancellors in the university—one is in charge of academic affairs and the other of planning and administration.

Similarly, the University Act provides for more than one Registrar which is a departure from conventional universities. It is felt that it is not possible for one Registrar to grapple with the wide range of administrative and related activities in the university. Further, it was thought desirable that senior officers must head different divisions of the university like administration, academic evaluation, etc. With this change, all the important branches of the university will be headed by officers of the rank of Registrar which gives equal status to the heads of various divisions in the university administration. These changes are, thus, introduced deliberately in the organisation of the university.

Unlike the conventional universities, whose academic activities are organised in the shape of departments, the National Open University has only Schools. This is important to ensure inter-disciplinary and multi-disciplinary programmes which the university is expected to offer. Arrangements like discipline-based departments are ill-suited for an unconventional university like the Indira Gandhi National Open University. Each of the Schools is headed by a Director. Since the Heads of the Schools have both academic and administrative functions, the nomenclature has been changed from Dean to Director. The heads of technical units like the Computer Centre will also be designated as Directors. This brings a certain amount of uniformity.

Academic Programmes

This university offers both short-term and long-term programmes in the areas of general education, provides continuing education, extension education and facilities for research. These programmes lead to certificate, diploma, graduate, post-graduate and research degrees. Flexibility is the cornerstone of the Indira Gandhi National Open University, indeed of the open university system itself. Its approach is flexible in offering programmes, flexible in the courses offered, flexible to provide for mobility of students from one system to another system or from one university to another—conventional or unconventional. It is flexible in the duration of study and enables a student to dovetail his certificate or diploma studies into undergraduate or post-graduate studies. More important than all these is its approach which is flexible with regard to entry regulations to enable different sections of the community like working people, housewives and the disadvantaged groups to take advantage of the facilities offered by it. In the first instance, the university is offering two diploma programmes—distance education and management. The diploma in distance education is mainly meant to help those who would like to have a career, either full-time or part-time in distance education. Since a large number of persons are likely to be involved either in the open university system throughout the country or in correspondence courses, it is necessary to expose them to the system of distance education. Twelve hundred students have taken admission in this university. The diploma in business management is open to those who have worked in a supervisory capacity for three to five years. It is three years in the case of those who are graduates and five years for those who are non-graduates. Three thousand and three hundred students have taken admission in this course. This course is modular and will eventually lead to the master's programme in business management.

The other diploma programmes which are under preparation are: rural development, computer education, nutrition and health, creative writing and pre-school education. The duration of each of these courses is nine months. In addition, certificate courses are also being prepared particularly in rural development and nutrition and health.

In addition, a diploma programme in higher education and a programme in planning and management of education are being prepared. Further, to meet the requirements of defence personnel, certain special programmes are being designed for them.

The university has done a massive exercise for launching its undergraduate programmes in B.A., B.Com., and B.Sc. The first two courses are open to anyone; there are two streams of students—non-formal (who do not have any qualification) and those who have passed the requisite qualification, i.e., 10 + 2 examination. The non-formal students are eligible to join the B.A. and B.Com. courses, provided they pass an entrance test administered by the university. The duration of the undergraduate courses is three years; a student is free to complete them according to his convenience but the upper limit for such completion is eight years. The special characteristic of the undergraduate courses of this university is that there are the foundation courses which deal with such general subjects like Indian civilisation and culture and importance and growth of science and technology. In addition, the students study the core and applied courses. Another important feature of the courses is that all courses are prepared in the form of credits and the student has to obtain 96 credits to complete his undergraduate course.

Thousands of persons are working as librarians all over the country in schools, colleges and other institutions, but many of them do not have the professional qualifications. Several of them would now like to acquire the professional qualifications, but cannot afford to leave their work or are not able to get admission in the conventional system. To help such persons, a bachelor's degree programme in library and information sciences is being prepared.

Instructional Methods

Like the other open universities, the Indira Gandhi National Open University adopts different methods of instruction depending upon needs and requirements. The university makes use of modern communication technology as well as developments in educational technology to impart quality education to its distance learners. The university is a multi-media university using printed texts, radio and TV broadcasts, audio-visual aids, home experiment kits and face-to-face teaching. There is no rigidity in the use of these different media and emphasis is on the requirements of the programmes and needs of the students.

At the moment, the university is using printed texts, audio and video, and from 1988, when the undergraduate courses begin, radio and TV will also be used.

Preparation of Course material

A programme is first identified and the course structure is designed in consultation with experts from other universities. Once the programme is approved, the course team is appointed, consisting of course writers and an editor whose responsibility is to coordinate the work. The course material is prepared by teams of experts who are mostly drawn from the conventional universities. They are advised in the preparation of the courses by the experts in educational technology from the Division of Distance Education. The package of audio and video material is also decided by them.

Staffing

There are three types of staff working in the university—academic, technical and non-academic. The qualifications required for their appointment and salary scales are similar to those in the other central universities. There are 80 full-time and 269 part-time academic staff members. In the technical, production and non-academic category there are 370 full-time staff members. The number of academic as well as non-academic staff is likely to increase in the coming years. The full-time staff are recruited on the basis of an all-India advertisement. The part-time staff are drawn from the conventional universities who help this university in various capacities as counsellors, coordinators, course writers and editors.

Regional and Study Centre

To provide support to the students in their studies, there is a network of study centres and regional centres. At the moment, there are 96 study centres and the proposal is to establish 100 of them. A study centre is located in an existing educational institution. It has a small library, audio-video equipment and cassettes, and counsellors who are part-time academics who agree to help and advise the students at the study centres. The head of the study centre is the Coordinator whose function is to manage the study centre.

The work of the study centres is coordinated by a Regional Centre. At the moment, there are ten regional centres, but eventually there will be one regional centre in all the major states in the country. The regional centre is headed by a Regional Director, who is assisted by a small nucleus of full-time staff.

Finances of the University

The Indira Gandhi National Open University is funded by the Department of Education of the Ministry of Human Resource Development. With a view to maintaining its distinctive character, the university has been kept outside the purview of the University Grants Commission. The annual budget of the university for the year 1987-88 is as follows:

Receipts		Rs.
Grants from Government	—	122.1 million
Fees from students	—	7.0 million
Receipts from publications	—	0.6 million
Miscellaneous	—	0.4 million
		130.1 million

Almost the entire income came by way of grants from the Government of India.

Expenditure		Rs.
Revenue	—	64.5 million
Capital	—	65.6 million
		130.1 million

From the foregoing, it is evident that the Indira Gandhi National Open University has all the features of an open university, viz., relaxed entry regulations, scope for self-pacing, flexibility in the combination of courses, transfer of credits, home-based education and technology-based instruction. All these are considered as essential features of a distance teaching university and distinguish it from the conventional universities.

IGNOU's Role in Distance Education

The National Policy on Education (1986) of the Government of India stresses the importance of the non-formal system of education to expand the educational facilities in the country. It is also proposed to strengthen distance education institutions and improve their quality of education. In order to do this in higher education, the Indira Gandhi National Open University has been charged with the responsibility of promoting the open university and distance education systems in the country. It is also responsible for determining the standards of teaching, evaluation and research, and for performing this function the university has the powers to allocate and disburse grants to such institutions. It is expected to be a pace-setter for all distance teaching institutions in the country. It will also function as a resource centre and will help other distance teaching institutions in maintaining high standards of education.

A number of States have announced their intention to set up open universities. Prominent among them are West Bengal, Maharashtra, Kerala, Uttar Pradesh, Madhya Pradesh, Bihar, Rajasthan, Gujarat, Karnataka, and Orissa. Most of them have also appointed committees to examine the feasibility of setting up open universities in their States. Two States—Rajasthan and Bihar—have already set up their open universities and some others are in the process of setting up their universities. But a few State Governments like West Bengal and Uttar Pradesh appear to have postponed their decision to start their open universities. The thinking in some other States appears to be to see how they can take advantage of the courses offered by the Indira Gandhi National Open University and then decide about their own state open universities.

In this connection, an important question is raised with regard to the relationship between the National Open University and the state open universities. This issue has been discussed with the concerned functionaries in several meetings, and the consensus that is emerging is that unnecessary duplication in the production of course material should be avoided. It is generally accepted that all the open universities in the country should form a Network in which they would use courses developed by each other. If a good course has already been produced by one of the members of the Network, as far as possible, the other institutions should not duplicate it. This will not only save enormous expenditure on the production of the courses, but also a lot of effort and time. Where necessary, they could adapt the courses into the local language. Another feature of the Network is that a student who has joined one open university would be free to take courses from other open universities. Thus, a large number of courses would be available in the pool of the Network of the open universities. This, however, pre-supposes that there is uniformity with regard to the structure of the courses. About 60–70 per cent of the syllabi in a course should be common throughout the country and for 30–40 per cent each university would be free to have its own courses.

Affiliation and recognition is the third role of the Indira Gandhi National Open University. Like many conventional universities, the Indira Gandhi National Open University can affiliate any educational institution, located both inside and outside India. It can also recognise any institution of higher learning for purposes of receiving grants.

Thus, we see that the Indira Gandhi National Open University will not only function as an open university but also perform the leadership role in distance education. It can be expected that with the establishment of this university, distance education would be encouraged and strengthened.

The establishment of the Indira Gandhi National Open University has stirred ambivalent reactions. The foremost suspicion lurking in the minds of many is, how different is the National Open University from correspondence courses? Do we need a separate university for promoting distance education? It is important to remember that the open university is very different from correspondence institutions, though both impart distance education. The latter function within the overall framework of a conventional university, follow the rules and regulations, course structure, etc., of the formal system, do not have scope for innovation and are not flexible enough to adjust to the needs of different categories of learners. More significant than all these features is the legal status conferred on and inherent in the concept of an open university. The correspondence institutions, as part of the formal university system, do not have the autonomy of a university. The Indira Gandhi National Open University, like other universities in the country, has a separate legal existence and enjoys autonomy like its counterparts in the formal systems. It is this basic difference, i.e. the legal status of the National Open University and approach to distance education that distinguishes it from other institutions of distance teaching in the country.

Many also wonder whether the establishment of the Indira Gandhi National Open University will provide an alternative system of higher education in the country. Will it substitute the conventional educational system? The Indira Gandhi National Open University is not aimed at replacing the formal system of education. It is not a substitute for the formal system, nor does it make the formal system of education infructuous. What is aimed at is to widen educational opportunities, by using modern communication technologies, to those who have hitherto been denied access to education. Its programmes will help to strengthen education in general and distance education in particular.

The establishment of the Indira Gandhi National Open University is an important milestone in the development of higher education in the country. It is hoped, the university will play a leadership role in strengthening distance education in the country. The university will provide innovative and high quality education. This will help not only its own students, but also the students of the conventional universities. The university has great potential to equalise opportunities and take higher education to the doorsteps of the people. In this connection, the observations of Shri K.C. Pant while piloting the Bill in Parliament are pertinent. He said: "As has happened in many other countries, it is expected that the National Open University will have a positive impact on the rest of the educational system. Even those students who are not enrolled with it will be able to take advantage of its material and media programmes. We are breaking new ground in the field of education today, that we are taking a step which is full of promise and great potential" (Pant, 1985).

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9

MANAGEMENT AND DEVELOPMENT SYSTEM OF UNIVERSITAS TERBUKA

ATWI SUPARMAN

Introduction

In Indonesia, as in several developing countries, one of the many issues in higher education is the problem of large numbers seeking access to education. The yearly increase of Senior High School (SHS) graduates puts pressure for more places on universities and institutes for higher education. For example, in 1985, the number of SHS graduates was about 600,000 and at the end of *PELITA IV* (the Fourth Five-Year Development Plan), i.e. in 1988/1989, it is predicted that the number will increase to about 1.1 million graduates. However, the intake capacity of universities and institutes of higher education at the end of *PELITA IV* would only be about 400,000 people, which means that about 700,000 SHS graduates will not be able to find a place at the higher education institutions.

One of the alternative solutions undertaken by the government to meet this demand for more places at the higher education level was to establish Universitas Terbuka (UT), a logical policy to side-step development of expensive new campuses. Other higher institutions will be increasing their enrolment as well, but large numbers would be helped by the UT. The Universitas Terbuka (inaugurated by the President on 4 September, 1984) is not only responsible for expanding educational opportunities but it has also the responsibility to strengthen the government's commitment to improve the quality of education and to make education more relevant to the national development needs. In addition, the UT has to provide equality of opportunity through higher education for the people who, for various reasons—geographical, socio-economic or physical disability—are not able to attend the conventional higher education institutions. The President of the Republic of Indonesia in his inaugural address at the Universitas Terbuka stated:

Due to the wide and scattered archipelago, Universitas Terbuka is

> an appropriate response to the need of increasing equality of opportunity to higher education.*

Therefore, the Universitas Terbuka has been considered as a complementary system to the existing higher education system, not alternative in nature. Since its initiation, the name Universitas Terbuka or Open University itself, has invited many questions. What is the Universitas Terbuka? In accordance with the President's Decree (No 41, 11 June, 1984) the Universitas Terbuka is a State university. The Term "terbuka" (open) has several meanings: first, open for everybody, every senior high school graduate, regardless of age or year of high school certificate; second, open to study, not restricted to lecture rooms, places and time schedule. The term "open" can be associated with open school, open learning, open education, distance school, distance learning, distance education, distance teaching, correspondence school, correspondence learning and correspondence education. To find an appropriate definition for the term open or distance education is not easy. Schramm (1981:i) indicated that: "It is better to describe distance teaching by what it does than what it is." He further explained:

> Distance teaching uses the media of communication to extend learning opportunities beyond the classroom and the campus, and to share expert teaching more widely than any teacher or school otherwise could do. Thus, distance teaching makes it possible for persons who want to learn to study where they are, regardless of age, of working hours or distance from a centre of learning.

Holmberg (1977:9) defined distance education as:

> The various forms of study at all levels which are not under the continuous, immediate supervision of tutors, present with their students in lecture rooms or on the same premises, but which, nevertheless, benefit from the planning, guidance and tuition of a tutorial organisation. Distance education includes all those teaching methods in which, because of the physical separateness of learners and teachers, the interactive as well as the preactive, phase of teaching is conducted through print, mechanical or electronic devices.

Basically, the goals of the academic programme of the UT are the same as those of the conventional universities, i.e. to produce skilled manpower in certain areas at the sarjana (baccalaureate) as well as at the diploma level. Their difference is in the methods used to achieve the stated goals. At the conventional universities, the teaching-learning process is conducted through face-to-face tutoring on certain time schedules while at the UT, the students received learning materials specially designed to enable them to study on their own, independent of direct assistance from a lecturer. This mode of learning is termed as "independent learning". Because the students learn at a place far from the learning centre, it is called distance learning.

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* The President of the Republic of Indonesia in his inaugural address of Universitas Terbuka on 4 September, 1984.

To enable an effective and efficient process of independent learning, the UT developed "self-instructional" learning material which is usually called "self-instructional modules" or modules. Those materials are mainly in the form of printed materials and audio cassettes. In addition to the modules, the UT also presented learning materials through television, radio, magazines and through other telecommunication media such as Single Side Band (SSB), satellite, and teleconference.

Besides providing an opportunity to the new senior high school graduates who were unable to get a place at the conventional universities, the UT also provides an opportunity for those living in remote areas, or people such as housewives, working people, etc. who live in the cities but do not have the opportunity to go to campuses.

A detailed description of the target population of the UT is as follows:

1. Newly Senior High School (SHS) graduates.
2. SHS graduates who, for various reasons, were not able to enter higher institutions. For example, those who were formerly not interested in furthering their study right after their SHS graduation.
3. People who were unable to enter universities because they live far from the city where the university is located and do not have enough money to live in the city.
4. City people who have difficulties in attending the conventional university regularly. For example, housewives who have to take care of their children, and physically handicapped people.
5. Working people who cannot leave their daily work.
6. Junior and Senior High School teachers. They can take a diploma II or strata I (baccalaureate) programmes without

leaving their teaching responsibilities.

7. Lecturers at the state as well as private universities who do not have a teaching certificate to teach at the higher education level.

In the first academic year (1984/1985), the enrolment at the UT was 57,000 (Table 9.4). In the second year (1985-1986), the student body of the UT reached about 89,000. In 1985, the number of new students according to each academic programme in each region is shown in Table 9.5. For the next five years, it is anticipated that UT students will increase to about 500,000.

General characteristics of UT students in 1984–1985 are: male 81 per cent and female 19 per cent; working people 80 per cent and non-working people 20 per cent; married 46 per cent and single 54 per cent.

Faculty, Academic Programme, Level and Target Audience

The type of Faculty, Academic Programme, Level and Target Audience is shown in Table 9.1.

TABLE 9.1
FACULTY, ACADEMIC PROGRAMME, LEVEL AND TARGET AUDIENCE, ACADEMIC YEAR 1984/1985 TO 1985/1986.

Faculty	*Academic Programme*	*Level*	*Target Audience*
Economics	Economics and Development Study	S 1	Senior High School (SHS) graduates.
Social and Political Sciences	Business Administration	S 1	SHS graduates
	Public Administration		SHS graduates
Mathematics and Natural Sciences	Applied Statistics	S 1	SHS graduates
Teaching and Educational Sciences	Biology	S 1	SHS teachers with a Bachelor's degree certificate and at least two years teaching experience.
	Chemistry	S 1	
	Physics	S 1	
	English Language	S 1	
	Pancasila Moral Education	D 2	Junior High School Teachers with a D 1 certificate and at least
	Indonesian Language	D 2	
	English Language	D 2	
	Natural Sciences	D 2	

Mathematics	D 2	two years' teaching experience
Social Sciences	D 2	
A (for Non-Education lecturers)	A 5	University lecturers who do not have university teaching certificate
Education		
B (for Education lecturers)		
History		
Mathematics		
Chemistry		
Biology		
Educational Technology		
Sports and Health		
Guidance and Counselling		
Economics		
Pancasila Moral Education		
Indonesian Language		
English Language		

At present, besides the above, several academic programmes are being developed for the near future (Table 9.2).

TABLE 9.2
UT'S ACADEMIC PROGRAMME BEING DEVELOPED FOR THE NEAR FUTURE

No.	*Academic Programmes*	*Level*
1.	Family Welfare	D 2
2.	Health and Sports	D 2
3.	Non-formal Education	D 2
4.	Management	S 1
5.	Industrial Management	S 1
6.	Applied Mathematics	S 1
7.	Development Administration	S 1
8.	Tax	D 3
9.	Population and Environment Studies	D 1
10.	Accountancy	D 3
11.	Agriculture	D 3
12.	Law	D 3
13.	Governmental Studies	D 3

14.	English Language	S 1
15.	Physics	D 3
16.	Architecture	
17.	Nursing Teaching	D 3
18.	Indonesian Language	S 1
19.	Mathematics	S 1

The Management of the Universitas Terbuka

Organisational Set-Up

At the central level, the organisational set-up of the Universitas Terbuka is basically similar to the organisational structure of the regular or conventional universities and institutes. The university head is the Rector and he is assisted by three Assistant Rectors. Assisting components to this top management consist of: the Bureau of Academic Administration and Student Affairs, the Bureau of General Administration and three Centres, namely, the Centre for Research and Service to the Community, the Centre for Educational Media, Informatics and Data Processing and the Centre for Examinations.

In addition, there are four Deans as executing components, namely the Dean of Faculty of Teaching and Educational Sciences, the Dean of Faculty of Economics, the Dean of Faculty of Social and Political Science and the Dean of Faculty of Mathematics and Natural Sciences.

Considering the student population of the UT which is scattered all over Indonesia, it needs some decentralised management. At the regional level, there are 32 units called the Distant Learning Programme Units (UPBJJ) and each unit is managed by a Director. The diagram of the organisational set-up of the UT is shown on the next page. At the second year, most of the UPBJJ are expanded to have one to three sub-units at the *kabupaten* (district) level (see Table 9.3).

Each UPBJJ has a Director. He is assisted by a Head of Non-Education Programmes, a Head of Education Programmes, a Head of Akta V Programmes, and a Head of Administration Sub-Division. The UPBJJ is supervised by the Rector(s) of the State conventional university located in the region.

Figure 9.1

DIAGRAM OF ORGANISATIONAL SET-UP OF THE UNIVERSITAS TERBUKA

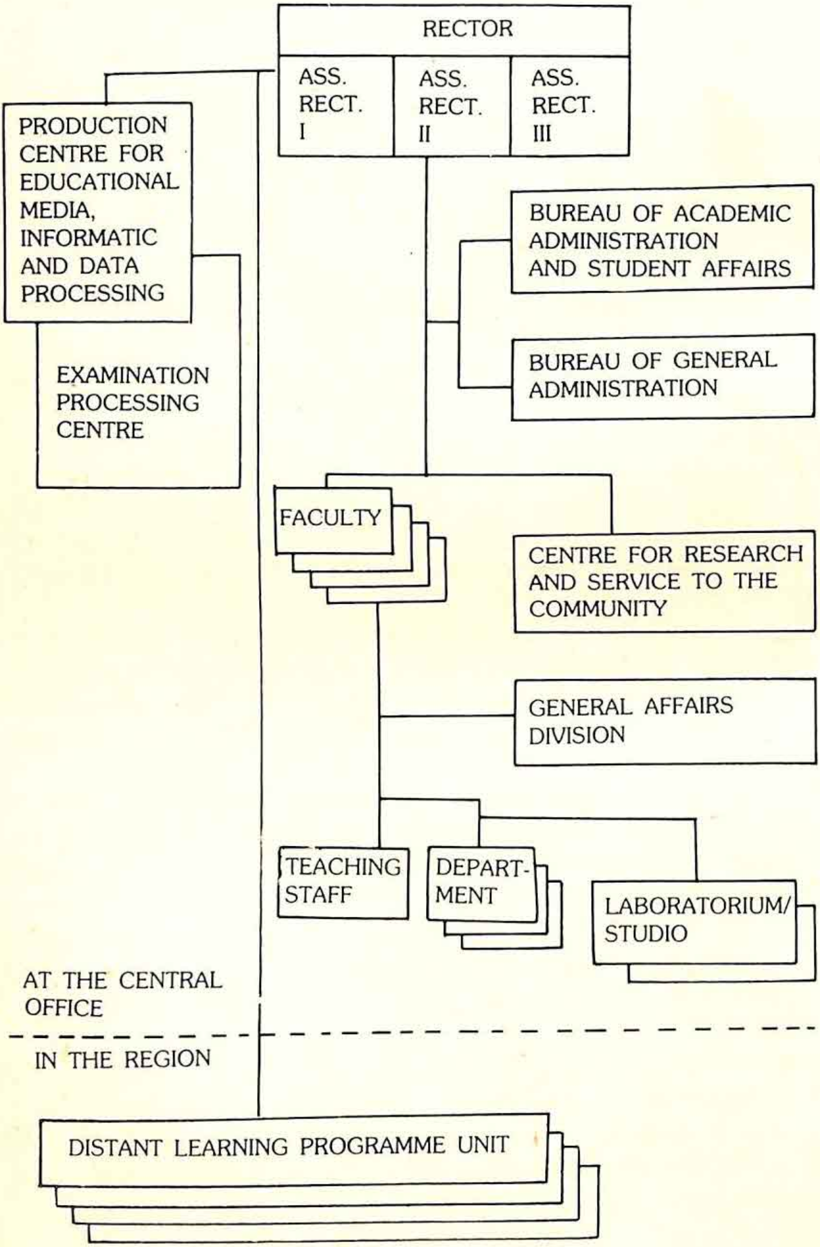

RECTOR
ASS. RECT. I
ASS. RECT. II
ASS. RECT. III
PRODUCTION CENTRE FOR EDUCATIONAL MEDIA, INFORMATIC AND DATA PROCESSING
EXAMINATION PROCESSING CENTRE
BUREAU OF ACADEMIC ADMINISTRATION AND STUDENT AFFAIRS
BUREAU OF GENERAL ADMINISTRATION
FACULTY
CENTRE FOR RESEARCH AND SERVICE TO THE COMMUNITY
GENERAL AFFAIRS DIVISION
TEACHING STAFF
DEPART-MENT
LABORATORIUM/STUDIO
AT THE CENTRAL OFFICE
IN THE REGION
DISTANT LEARNING PROGRAMME UNIT

TABLE 9.3
LOCATION OF REGIONAL UNITS

NO.	UPBJJ LOCATION	BRANCH DISTRICTS
1.	BANDA ACEH	— MEULABOH
2.	MEDAN	— PEMATANG SIANTAR — KISARAN
3.	PEKANBARU	—
4.	TANJUNG PINANG.	— PANDANG
5.	JAMBI	— MUARO BUNGO
6.	PALEMBANG	— PANGKAL PINANG — BATU RAJA
7.	BENGKULU	— MANNA
8.	BANDAR LAMPUNG	— METRO — KOTA BUMI
9.	JAKARTA	—
10.	BOGOR	—
11.	BANDUNG	— SERANG — CIREBON
12.	PURWOKERTO	—
13.	SEMARANG	— PEKALONGAN — PATI — MAGELANG
14.	SURAKARTA	— KILATEN
15.	YOGYAKARTA	—
16.	SURABAYA	— MADIUN — SIDOARJO — GRESIK — MOJOKERTO
17.	MALANG	— KEDIRI — PASURUAN
18.	JEMBER	—
19.	DENPASAR	— SINGARAJA
20.	MATARAM	— SUMBAWA BESAR
21.	KAUPANG	—
22.	DILLI	—
23.	PONTIANAK	— SINGKAWANG
24.	PALANGKARAYA	—
25.	BANJARMASIN	—
26.	SAMARINDA	— BALIKPAPAN
27.	UJUNG PANDANG	— SINJAI — PARE-PARE
28.	PALU	— POSO
29.	KENDARI	— UNAAHA'
30.	MANADO	—
31.	AMBON	—
32.	JAYAPURA	— SORONG

The development of Instructional Materials

The development of instructional materials started with the decision on the academic programme to be offered, followed by curriculum development, writing the basic course outline (GBPP) and the development of the modules which consist of the printed materials. A feasibility study is conducted before deciding on the academic programme to be presented to the Director General of Higher Education for consideration and final decision. The development of the curriculum is carried out by curriculum experts, contents experts, professionals and a consortium of higher educationists. For the writing of printed materials the UT recruited lecturers from the conventional state universities who are assisted by experts in instructional design and graphic artists.

The printed materials consist of printed subject matter booklets and work books. The subject matter booklet basically is constructed as follows:

The introduction
The instructional goals
The instructional objectives
Explanation and examples
Exercises
Summary
Self-test

Suggested solution and logical explanation leading to the right answer feedback and follow through.

The work book provides spaces for doing the exercise and answering formative tests. The process of curriculum and instructional materials development is shown in Figure 9.2.

Application and Registration

The process for application to the Universitas Terbuka is managed as follows:

First, through the post office for those applying to the non-education academic programme namely: business administration, public administration, applied statistics, economics and developmental studies. The applicant can purchase an application form at the local post office and then send it to the Universitas Terbuka also by postal service. The applicants in this category are old as well as new high school graduates regardless of age.

Second, through the university entrance examination (SIPENMARU) where the applicant takes an examination together with

CURRICULUM AND INSTRUCTIONAL MATERIAL DEVELOPMENT PROCESS

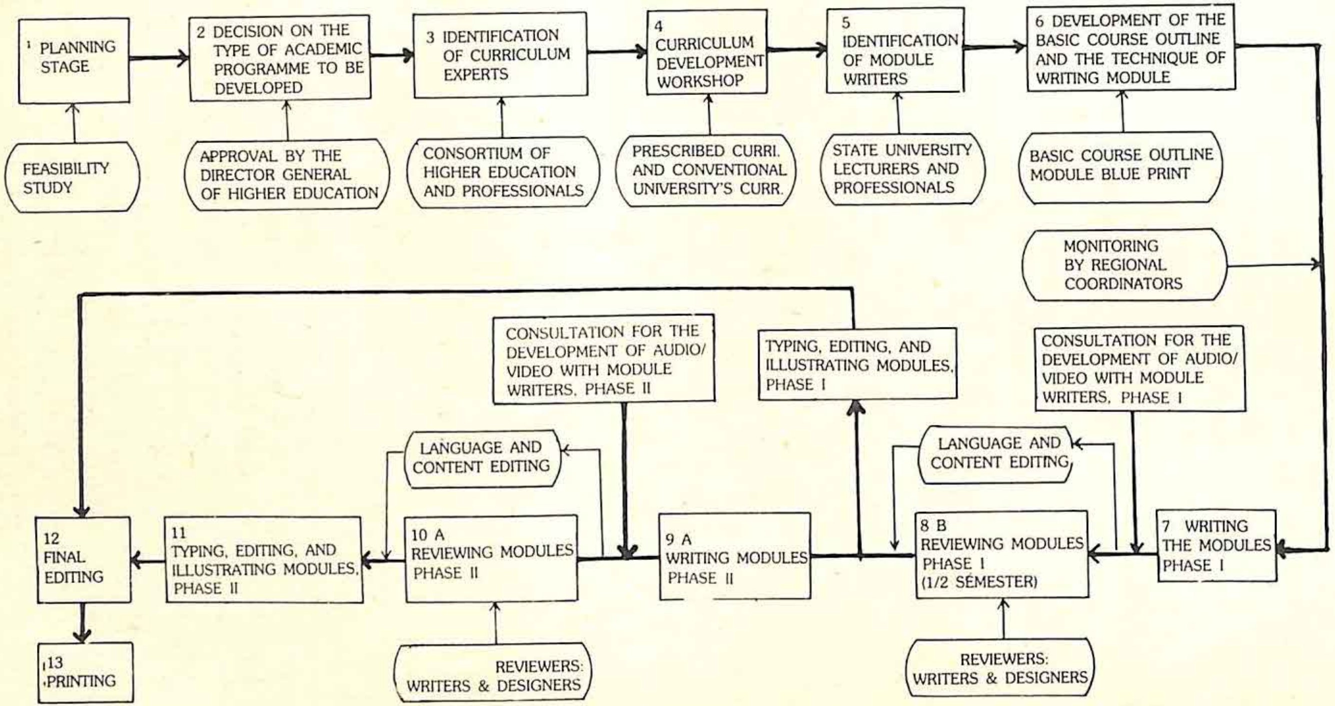
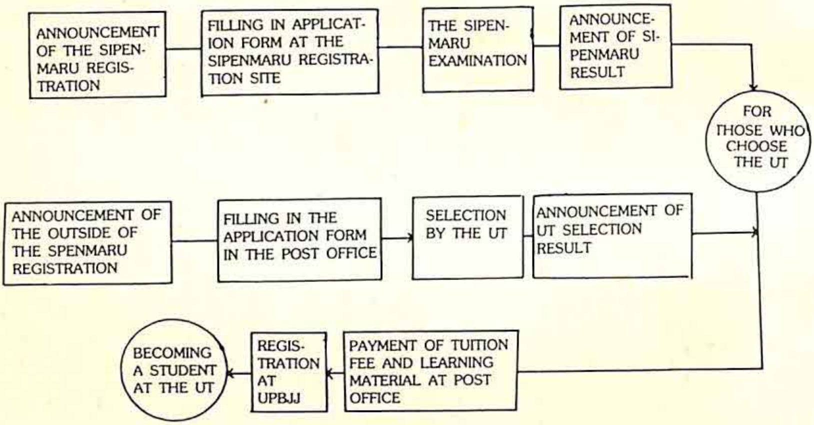

1 PLANNING STAGE
FEASIBILITY STUDY
2 DECISION ON THE TYPE OF ACADEMIC PROGRAMME TO BE DEVELOPED
APPROVAL BY THE DIRECTOR GENERAL OF HIGHER EDUCATION
3 IDENTIFICATION OF CURRICULUM EXPERTS
CONSORTIUM OF HIGHER EDUCATION AND PROFESSIONALS
4 CURRICULUM DEVELOPMENT WORKSHOP
PRESCRIBED CURRI. AND CONVENTIONAL UNIVERSITY'S CURR.
5 IDENTIFICATION OF MODULE WRITERS
STATE UNIVERSITY LECTURERS AND PROFESSIONALS
6 DEVELOPMENT OF THE BASIC COURSE OUTLINE AND THE TECHNIQUE OF WRITING MODULE
BASIC COURSE OUTLINE MODULE BLUE PRINT
MONITORING BY REGIONAL COORDINATORS
7 WRITING THE MODULES PHASE I
CONSULTATION FOR THE DEVELOPMENT OF AUDIO/ VIDEO WITH MODULE WRITERS, PHASE I
LANGUAGE AND CONTENT EDITING
8 B REVIEWING MODULES PHASE I (1/2 SEMESTER)
REVIEWERS: WRITERS & DESIGNERS
TYPING, EDITING, AND ILLUSTRATING MODULES, PHASE I
9 A WRITING MODULES PHASE II
CONSULTATION FOR THE DEVELOPMENT OF AUDIO/ VIDEO WITH MODULE WRITERS, PHASE II
LANGUAGE AND CONTENT EDITING
10 A REVIEWING MODULES PHASE II
REVIEWERS: WRITERS & DESIGNERS
11 TYPING, EDITING, AND ILLUSTRATING MODULES, PHASE II
12 FINAL EDITING
13 PRINTING

Figure 9.2

other applicants to the conventional state universities. In the SIPENMARU application form, the applicant can choose two out of the many universities where he/she wants to further his/her study. The Universitas Terbuka is among the many alternatives one can choose. In this category the applicants are restricted only to senior high school graduates of the preceding three years (See Figure 9.3).

Figure 9.3


ANNOUNCEMENT OF THE SIPENMARU REGISTRATION
FILLING IN APPLICATION FORM AT THE SIPENMARU REGISTRATION SITE
THE SIPENMARU EXAMINATION
ANNOUNCEMENT OF SIPENMARU RESULT
FOR THOSE WHO CHOOSE THE UT
ANNOUNCEMENT OF THE OUTSIDE OF THE SPENMARU REGISTRATION
FILLING IN THE APPLICATION FORM IN THE POST OFFICE
SELECTION BY THE UT
ANNOUNCEMENT OF UT SELECTION RESULT
PAYMENT OF TUITION FEE AND LEARNING MATERIAL AT POST OFFICE
REGISTRATION AT UPBJJ
BECOMING A STUDENT AT THE UT

Third, through the regional office of the Ministry of Education and Culture for those applying to the academic programme of the Faculty for Teaching and Educational Sciences, diploma as well as S_1 level. A pre-selection is carried on by the regional office of Education and Culture for junior and senior high school teachers who want to further their study to the respective levels of education. These selected applicants are given application forms that have to be filled in and sent to the Universitas Terbuka through the postal service. The Universitas Terbuka further examines the relevance of the applicants' educational background to the academic programme they have enrolled in and selects them accordingly.

Fourth, applying for *Akta V* programmes through the Directorate General of Higher Education. They are university lecturers who do not have teaching certificates. The applicants send their application forms to the Directorate General of Higher Education through their respective universities or institutes. The names of the selected applicants are sent to the Universitas Terbuka.

Applicants of the first three categories have to register twice. The first stage is the administration registration which is at the post office where the applicant has to pay SPP (tuition fee) Rp. 20,000 for one semester. In addition, the students of non-education programme have to buy instructional materials which cost Rp. 35,000 per one semester package. The second stage is the academic registration done at the Regional Distant Learning Programme Units (UPBJJ). This academic registration is required in order to obtain a student card. In the first year, the academic registration is conducted at a separate place from the post office, but in the second year it will be carried out at the post office but managed by the UPBJJ's staff. The registration can be done individually as well as by groups in about one month's time. If it is done by groups, the other members of each group have to give a letter of authority to the person selected to register for them.

Distribution of Learning Materials

Ideally, the instructional materials should be sent to prospective students individually, but due to several factors such a service is impossible at present. For example, not every student's address can be reached by the postal service because of the uncertainty of the student's address as well as its isolated location. To reach such an address, a relatively longer time is needed. In addition, the time available for sending learning materials is very short, since the completion of writing those materials is almost always near the beginning of the semester.

Because of the above problems, the distribution of the non-education learning materials can only reach the post office where the UPBJJ or sub-units of UPBJJ are located. As a consequence, the students have to get their learning materials from the above-mentioned post office and at the same time register or re-register. The learning materials for the education programmes are sent to the students through the Director of UPBJJ. The Akta V learning materials particularly, are distributed from the development and production centres that are located in Bandung, Semarang Malang, and then to the universities which are appointed as centres for the management of Akta V programmes in each region and on to the participants.

Academic and Examination System

As indicated earlier, in Section I, the learning process at the UT is mainly independent study. i.e. studying the modules without the assistance of a tutor. This independent study could be conducted individually or in a group. This method of studying needs high motivation, diligence and strong self-discipline, as indicated by the President of the Republic of Indonesia in his address at the opening of the Universitas Terbuka:

> I believe that the students of Universitas Terbuka are fully aware that to be successful at this university very much depends mainly on your perseverance and determination. The Government has provided the opportunity and it is expected that you take an attitude accordingly.

Until the third semester, the learning materials that have to be studied by the UT students cover four or five subject matters that are valued 12 SKS (credit semester units). To study the learning materials that are valued 12 SKS, a student should put aside about 24 hours per week for studying. Each SKS consists of three modules and, consequently, each subject matter which is valued two SKS, consists of six modules, while a three SKS subject matter consists of nine modules. Each module has about 40-50 pages.

Besides studying independently, the UT students have facilities for discussion or consultation with tutors. Most of the tutors are from conventional universities in the regions. These consultations are conducted three times per semester at the PBJJ and branch districts. The first tutorial is carried out after the students have studied for about six weeks which means that they have finished one-third of the learning materials they are supposed to complete in one semester. The second tutorial is given after two-thirds of the materials has been studied by the students or after they have studied independently for about 13 weeks. The third tutorial is conducted after the students have studied all the learning materials or after 20 weeks of independent study. By that time, they should be ready for the final examination. This tutorial, as noted above, is not the primary method of learning at the UT. The assistance given is only to students who feel they need it. In other words, it is not compulsory to attend the tutorials.

At the end of the first tutorial, the students have to take the unit one examination and the unit two examination should be taken after the second tutorial. Both are take-home examinations and the students are given one week to work on each examination. In addition to these take home examinations, the students have to take the final semester examination. In the first year, the end-of-semester examination is conducted at each UPBJJ. In the second year, it is also carried out at the *kabupatens* (districts). This end-of-semester examination, which takes about seven hours, is conducted on two Sundays and administered through tight supervision. There will be one supervisor for 15 students.

Because of the difference between the take-home unit examination and the supervised end-of-semester examination and due to the difference in the materials covered by these two kinds of examinations, different weights are given to each type of examination. Each unit examination is weighted 15 per cent while the end-of-semester examination weighted 70 per cent from the total score. The scoring process is computerised at the UT head office in Jakarta. Until recently the data processing was conducted at the computer centre of the University of Indonesia. Now the UT has its own computer system.

The grading system is done as follows:

80 – 100 = A or 4
70 – 79 = B or 3
60 – 69 = C or 2
50 – 59 = D or 1
49 = E or 0

The Monitoring System

Monitoring the Instructional System

The Universitas Terbuka's instructional system emphasises its control at the central level on the development of learning materials and the construction of test materials. The learning process depends more on the students.

The try-out of learning materials could not be carried out because the completion of writing the materials was too close to the time of implementation. As a change, right after the materials had been used by the students, the UT conducted an evaluation to get feedback about the important aspects needed for revision of these materials. Based on the feedback, the instructional materials are revised by the course writers with the cooperation of senior tutors and other subject matter experts.

Test materials are constructed by the module writers together with other experts of the same field and experts on test construction. The process of test construction is carried out centrally at the UT while the administration of examinations is conducted by the

UPBJJ. Besides evaluating the quality of the learning and examination materials, the UT also conducted evaluation on the test administration and tutorials. The test administration is monitored to get important feedback for the management of examinations, while monitoring of the tutorial system is carried out to get information for improvement of the tutorial system.

Monitoring the Registration

In the first year, registration of students through the post office and through the UPBJJ were separately monitored. The findings of this activity showed that many students did their administrative registration at the post office but failed to carry out the academic administration at the UPBJJ. From this experience, a decision was made that for the second year the registration should be conducted under one roof. An official from the UPBJJ should have a temporary office at the post office so that students could do the two kinds of registration in one place, that is, at the post office.

Monitoring the Expansion of the Universitas Terbuka

In the first year, 1984, the UT had its registration, tutorials and examinations at 32 UPBJJ centres, scattered throughout Indonesia. In this year, the information sent to the UT indicated that expansion of these services should reach the smaller places of the country. It was, therefore, decided that in the second year (1985) the UPBJJ should open places for registration, tutorials and examinations in the surrounding *kabupatens* (districts). But this expansion to the *kabupatens* could not be done by all the UPBJJ due to the limited manpower, transportation facilities and budget.

The Communication System

The distant learning system developed by the UT used several communication systems, both conventional and high technology. Printed materials for independent studies, face-to-face tutorials and audio cassettes, radio, television and teleconferences are all part of the learning system. Newspapers, letters, magazines, telephones, telex and telegrams are also used to send information from the UT to the UPBJJ or to students and vice versa. The distant learning system through satellite is also being used for upgrading of tutors in the eastern part of Indonesia.

To carry out its activities the UT works jointly with several institutions, such as:

1. The post office for the distribution of materials.
2. The Communication Technology Centre for Education and Culture and the technical units under its supervision such as the Media production (BPM) of Radio Yoga, the BPM of Radio Semargang, the BPM of Television Surabaya. These units assist the UT in the production of television, audio and radio programmes.
3. Telecommunications Directorate General for the installation of telephone and SSB.
4. TVRI (Television of RI) for the production and broadcasting of television programmes.
5. RRI (Radio of RI) for the broadcasting of UT radio programmes.
6. Computer centre of the University of Indonesia for data processing.
7. The Ministry of Home Affairs for expansion to *kabupatens*
8. Other mass media such as newspapers and magazines.
9. Printing companies for printing instructional materials.

Concluding Note

The UT had to face many problems in the first year; some of them were anticipated since the beginning but others could not be anticipated before operating the UT. Though the UT has taken the experiences of other nations into consideration in organising its open learning system, it needs to devise its own system to suit Indonesian conditions. It appears that several problems need to be considered in trying to find a system applicable to the country's conditions. Efforts are now being made to solve the problem. First, the addition of more academic programmes which can meet the demand of the government's development efforts. This can be done if:

a) the skill and expertise needed for the present development efforts are known more clearly; and
b) the number of existing manpower and the projection of future manpower needs in each field are available. Such data are almost non-existent.

Second, the development of learning materials and tests could be more intensively done. At present, workshops on writing the learning materials at the Universitas Terbuka are held about two to three times a month, but it is felt that this frequency is still not enough. Another alternative is that each faculty conducts its own workshop, thus having lesser involvement of more experts in the regions to write and improve the quality of the UT's learning materials.

Third, enrolment and registration would be conducted at more places than the existing 32 UPBJJ and the 31 additional *kabupatens*. This means more *kabupatens* which would reach the remote areas.

Fourth, distribution of learning materials to reach the students' homes.

Fifth, the number of learning materials distributed to each student would be according to the student's capability to take a certain number of credits per semester.

Sixth, the UT would recruit tutors with higher qualifications and train them to reduce the number of complaints that indicate that the quality of tutors is lower than expected. The involvement of local state university lecturers and professionals as tutors should be increased.

Seventh, encouraging students to form study groups.

Eighth, the development of the laboratory system has been started because in the near future the UT students need to conduct laboratory work. The UT will use local high school laboratories and develop mobile laboratory units soon.

Ninth, the UT will increase the frequency of the administration of the examinations so that the students will be able to take examinations and re-examinations more often every year.

Tenth, data processing by computer will be improved through the UT's own computer system.

TABLE 9.4

NUMBER OF STUDENTS 1984/1985 ACADEMIC YEAR

No.	LOCATION	CODE	PUBLIC ADMINISTR.	BUSINESS ADMINISTR.	APPLIED STATISTICS	ECONOMIC & STUDY DEV.	TOTAL
1.	BANDA ACEH	110	236	57	79	178	550
2.	MEDAN	120	672	280	297	494	1743
3.	PEKANBARU	160	232	118	95	249	694
4.	PADANG	140	707	167	262	619	1755
5.	JAMBI	170	128	48	—	118	294
6.	PALEMBANG	180	584	143	198	510	1435
7.	BENGKULU	190	148	28	46	101	323
8.	BANDAR LAMPUNG	200	652	183	177	406	1418
9.	JAKARTA	210	2757	1966	1622	2919	9264
10.	BOGOR	230	—	—	—	—	—
11.	BANDUNG	240	1028	393	770	1060	3251
12.	PURWOKERTO	410	—	—	—	—	—
13.	SEMARANG	420	914	368	553	735	2570
14.	YOGYAKARTA	450	1112	239	608	1035	2994
15.	SURAKARTA	440	932	294	434	452	2112
16.	MALANG	740	692	336	432	690	2150
17.	SURABAYA	710	1341	973	937	1153	4404
18.	JEMBER	760	—	—	—	—	—
19.	DENPASAR	770	542	109	177	398	1226
20.	MATARAM	780	160	40	93	134	427
21.	PONTIANAK	470	246	81	40	215	582

TABLE 9.4 (Contd.)

22. PALANGKARAYA	480	75	—	—	35	110
23. BANJARMASIN	490	188	34	82	264	568
24. SAMARINDA	500	142	130	130	185	587
25. dUJUNG PANDANG	800	273	162	125	345	905
26. PALU	820	75	35	46	48	240
27. KENDARI	830	149	31	20	135	335
28. MANADO	840	307	102	107	292	808
29. KUPANG	790	69	31	19	39	158
30. DILLI	880	220	40	40	120	420
31. AMBON	860	149	32	57	122	390
32. JAYAPURA	870	134	58	44	150	386
Total		14864	6478	7490	13267	42099

Note: The total number of students does not include 15.000 students of Educational programmes.

TABLE 9.5

NUMBER OF STUDENTS 1985/1986 ACADEMIC YEAR

		NON-EDUCATION (SI)					EDUCATION (D2)							EDUCATION (S1)					
No. LOCATION	CODE	ECON	B.AD	P.AD	STAT	TOTAL	PMP	IND	MAT	IPA	IPS	ING	TOTAL	FIS	KIM	BIO	ING	TOTAL	TOTAL
1. BANDA ACEH	110	222	307	99	88	716	9	11	14	20	8	16	78	5	11	15	14	45	839
2. MEDAN	120	607	1280	434	317	2638	15	35	55	44	21	25	195	27	41	37	43	148	2981
3. PEKANBARU	160	383	537	321	123	1364	0	20	0	14	30	0	64	0	0	22	23	45	1473
4. PADANG	140	595	1320	260	211	2386	0	0	86	78	101	0	265	42	41	41	43	167	2816
5. JAMBI	170	177	294	84	28	583	5	11	12	7	11	8	54	8	11	13	14	46	683
6. PALEMBANG	180	842	1706	438	263	3249	0	15	65	26	0	1	107	5	7	17	22	51	3407
7. BENGKULU	190	177	480	65	46	768	3	9	2	3	17	1	35	4	5	6	12	27	830
8. BANDAR LAMPUNG	200	503	1377	315	188	2383	0	16	16	17	17	17	83	0	0	22	23	45	2511
9. JAKARTA	210	4595	6288	3890	1702	16475	33	25	57	57	32	26	230	17	29	40	97	183	16888
10. BOGOR	230	223	355	138	129	845	2	5	2	3	7	1	20	4	3	5	7	19	884
11. BANDUNG	240	1798	2751	1246	942	6737	59	149	176	104	217	69	774	27	41	66	87	221	7732
12. PURWO KERTO	410	179	401	79	91	750	2	11	3	8	1	5	30	14	9	8	10	41	821
13. SEMARANG	420	1048	1931	622	490	4091	27	54	21	31	13	18	164	61	33	30	85	209	4464
14. SURAKARTA	440	598	1420	405	310	2733	2	38	16	7	33	5	101	17	49	47	0	113	2947
15. YOGYAKARTA	450	833	1592	338	408	3171	2	48	13	79	20	14	176	29	36	33	23	121	3468
16. SURABAYA	710	1386	1991	1340	773	5490	18	22	68	50	39	33	230	57	59	57	51	224	5944
17. MALANG	740	704	995	416	314	2429	8	21	39	26	22	19	135	23	29	33	39	124	2688
18. JEMBER	760	108	125	46	48	327	3	3	10	11	5	4	36	6	13	12	13	44	407
19. DENPASAR	770	356	635	125	117	1233	0	0	0	27	32	0	59	10	10	27	18	65	1357
20. MATARAM	780	137	298	73	63	571	0	24	63	0	0	0	87	12	9	12	14	47	705
21. KUPANG	470	106	245	52	23	426	3	21	20	4	21	10	79	0	0	10	5	15	520
22. DILLI	480	10	76	10	6	102	1	1	6	3	0	1	12	0	0	0	3	3	117
23. PONTIANAK	490	218	393	125	53	789	2	39	24	1	18	32	116	0	0	0	16	16	921
24. PALANG KARAYA	500	46	113	10	10	179	0	13	11	14	12	11	61	3	3	4	15	25	265

TABLE 9.5 (Contd.)

No.	LOCATION	CODE	NON-EDUCATION (SI)					EDUCATION (D2)							EDUCATION (S1)					
			ECON	B.AD	P.AD	STAT	TOTAL	PMP	IND	MAT	INA	IPS	ING	TOTAL	FIS	KIM	BIO	ING	TOTAL	TOTAL
25	BANJARMASIN	800	315	375	199	79	888	1	24	17	11	10	11	74	6	9	12	26	53	1015
26.	SAMARINDA	820	403	478	312	173	1366	0	0	0	38	24	0	62	12	7	16	11	46	1474
27.	UJUNG PANDANG	830	397	544	249	110	1300	19	31	39	33	18	29	169	24	7	45	41	117	1586
28	PALU	840	76	198	42	34	350	0	0	0	12	20	0	32	0	0	18	16	34	416
29	KENDARI	790	194	396	75	36	701	7	33	17	12	13	23	105	0	0	14	9	23	829
30.	MANADO	880	256	513	133	89	991	9	43	15	11	28	10	115	3	0	10	19	32	1138
31.	AMBON	860	162	226	60	44	492	6	20	0	7	19	0	52	0	0	4	0	4	548
32.	JAYAPURA	870	223	425	113	62	823	5	10	18	19	6	8	66	0	0	1	0	1	890
	TOTAL		17877	30065	12034	7370	67346	241	751	885	777	815	397	3866	416	462	677	799	2354	73566

*** The total number of students does not include 15,000 students of Educational Programmes which started before the UT was founded 1984.**

10

THE JAPANESE UNIVERSITY OF THE AIR

YOSHIYA ABE

Need for the establishment of the University of the Air

(1) Increasing opportunities for higher education

Using the medium of broadcasting for educational purposes means that the opportunity for higher education can be extended to many people. Accompanied by advances in economic development in Japan, the 1970s saw an increase in the number of people there wanting to enter institutions of higher education. Facilities of higher education, including universities, were enlarged for this purpose, but a university that makes use of broadcasting is the most effective answer to this demand.

(2) Offering an opportunity to return to school

With the development of the first technological society, the average person in society needs to learn more of the specialised knowledge of the new age. It is difficult for adults who must perform both social and professional obligations to receive a college education, because of problems caused by time limitations. Education via radio and television can remove this obstacle and offer people the opportunity to study once again. A broadcast university also provides the opportunity for higher education to those who have had to abandon going to university for geographical or economic reasons.

In relation to this, in June 1965, the Ministry of Education made an interview survey of Japanese from all over Japan over the age of 18. Of the 5,000 surveyed, 83 per cent responded. Here are some of the results.

(a) About 60 per cent said, "If it were possible to do it at home, even if it meant some extra effort, I have felt that I would like to study more."

(b) Nearly half said, "If a University of the Air were established, I would like to make use of it to study." One-third of these said that either they would only like to study for credit, those courses that interested them, or that they would study until they got a college degree.

(3) The improvement of higher education

In Japan the traditional structure of higher education has been for individual faculty members (Professors and Associate Professors) to lecture to students on the basis of the results of their own research, and the situation has more or less been that there is reciprocity and mutual cooperation both among members of a specific faculty and between universities. Because of this, through the cooperation of many public and private universities, it has been possible at the University of the Air to produce broadcast materials (the contents of lectures), and printed materials (textbooks) on the basis of the results of the latest research and the most recent educational technology. It is expected that this will bring about the opportunity for improvement in both content and methodology in education.

Also, if the possibility of establishing the transfer of credits with other universities can be realised, it is expected that it will propel the country's system of higher education towards becoming more flexible and flowing.

The Aims of the University of the Air

The University of the Air has the following aims:

1. To provide working people and housewives with the chance of lifelong university level education.
2. To provide an innovative and flexible system of university level education which is open to all high school graduates.
3. To cooperate with other universities in making full use of the latest knowledge and newest educational technology in offering a system of higher education which meets contemporary needs. In doing this the university aims to contribute to further improving the university level educational system in Japan by strengthening cooperation with existing universities, promoting the transfer of credits, deepening relations with other universities, encouraging faculty exchange, disseminating broadcast materials, etc.

Organisation

(1) The University of the Air Foundation

The construction of the University of the Air, along with its transmission facilities, was carried out on the basis of a law passed for that purpose. A President, Executive Directors, and Auditors were appointed. Also, an Operations Board of experienced academics from outside the Foundation was set up for the purpose of consultation on important aspects of running the University of the Air Foundation.

(2) .The University of the Air

The University of the Air has a President, two Vice Presidents, 28 Professors, 23 Associate Professors, Visiting Professors, Visiting Associate Professors, and part-time Lecturers. In addition, there are six study centres set up for schooling, academic counselling, and library use, and these centres also have educational personnel

At the level of university operations, there are a Faculty Assembly and a Faculty Council, which discuss research and personnel matters. In addition, there are within the university, an Educational Affairs Committee, Study Centre Committee, Student Affairs Committee, Library Committee, Curriculum Committee, and committees in each academic discipline.

(3) The Secretariat

A secretariat was established to manage the administrative affairs of both the University of the Air and the University of the Air Foundation. It includes the Director-General of the Secretariat, a General Affairs Department, an Academic Department, a Broadcast Department, and a Production Department.

The Academic Affairs Department is concerned with the administrative aspects of faculty meetings and meetings of the various committees, student grades, the study centres, and libraries. The Broadcast Department is concerned with management of administrative aspects of the broadcasting of lectures by radio and television. The Production Department, working in cooperation with the faculty, is concerned with the production of broadcast lectures.

The organisational structure of the University is represented in Figure 10.1

The Faculty

(1) Professors and Associate Professors

In addition to the preparation of the textbooks and audio-visual lectures for the courses they teach, the Professors and Associate Professors provide schooling and academic counselling at the study centres, as well as evaluating the students on their performance in tests and reports. Associate Professors, especially, are concerned

Organisational Chart

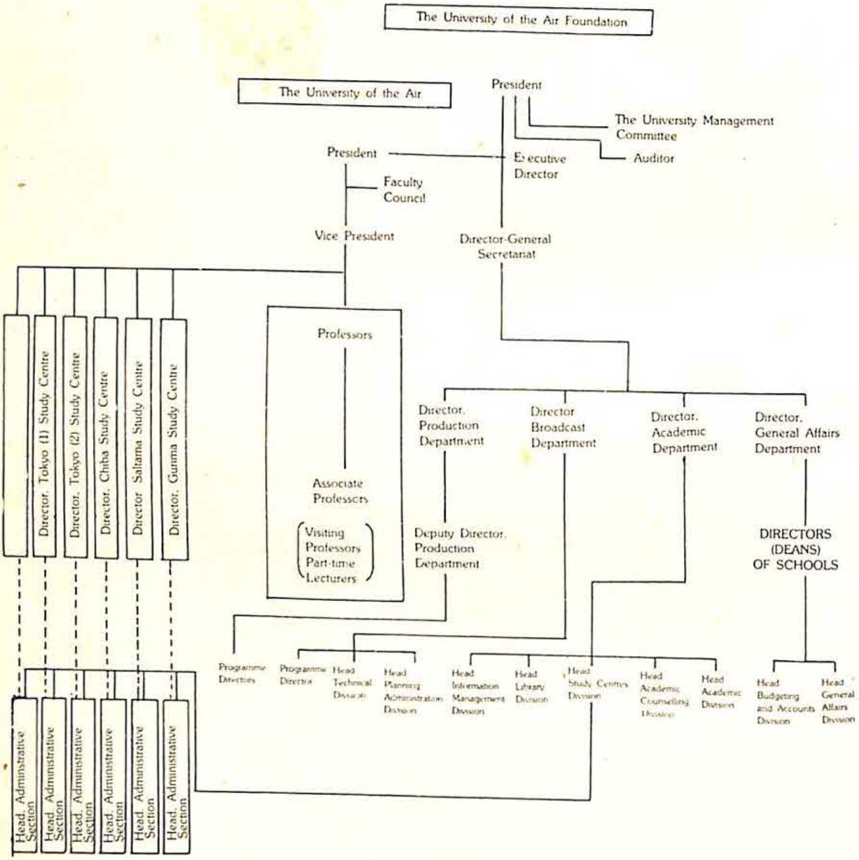

The University of the Air Foundation
President
The University Management Committee
Executive Director
Auditor
The University of the Air
President
Faculty Council
Vice President
Director-General Secretariat
Director, Tokyo (1) Study Centre
Director, Tokyo (2) Study Centre
Director, Chiba Study Centre
Director Saitama Study Centre
Director, Gunma Study Centre
Professors
Associate Professors
Visiting Professors Part-time Lecturers
Director, Production Department
Director Broadcast Department
Director, Academic Department
Director, General Affairs Department
Deputy Director, Production Department
DIRECTORS (DEANS) OF SCHOOLS
Programme Directors
Programme Director
Head Technical Division
Head Planning Administration Division
Head Information Management Division
Head Library Division
Head Study Centres Division
Head Academic Counselling Division
Head Academic Division
Head Budgeting and Accounts Division
Head General Affairs Division
Head, Administrative Section
Head, Administrative Section
Head, Administrative Section
Head, Administrative Section
Head, Administrative Section
Head, Administrative Section

Figure 10.1

with working at the study centres, where they provide schooling and academic counselling. The full-time faculty is now composed of 51 people. That number, however, is expected to increase to 75 by end of 1987.

(2) Visiting Professors and Visiting Associate Professors
Because of the difficulties involved in the full-time faculty teaching all of the courses offered by the University of the Air (104 at present, 270 by 1988), Professors and Associate Professors from other universities and research institutions have been invited to the University of the Air for the production of certain courses in their fields. At present, there are 122 Visiting Professors and Visiting Associate Professors. In addition to the production of textbooks and broadcast lectures, they are also responsible for evaluating the performance of their students.

(3) Part-time Lecturers
About 330 part-time Lecturers have been employed to handle the schooling at the study centres.

(4) Programme Directors
The Production Department includes the Programme Directors. They work with the professors producing broadcast lectures. There are 16 Programme Directors, including the Director of the Department.

(5) Administrative Personnel
In each Department of the Secretariat, there is a Director and Section Chief, as well as specialists and clerks.

The Organisation of the Courses

(1) The Faculty of Liberal Arts, Courses of Study, Majors
In response to the diversified demands of the people of Japan, and in order to widen the areas of study which relate to real life, the University of the Air established a Faculty of Liberal Arts, which includes three courses of study which have not heretofore been included in existing fields of academic study. Each course of study is divided into two areas of specialisation, one of which the student must select for more concentrated study in a systematic way.

	◆ Course of Study	◆ Major	◆ Educational Objectives
Faculty of Liberal Arts	Science in Everyday Life	Living and Welfare	A study of the knowledge necessary for a healthy and rewarding family life.
		Human Development and Education	A study of the basics of child-rearing and counselling for adolescents. This course also aims to provide an understanding of the role of education.
	Industrial and Social Studies	Social and Economic Studies	A study of political, economic and social systems and their related problems.
		Industry and Technology	A general survey of trends in the development of industrial technology and in management techniques.
	Humanities and Natural Sciences	Humanities	A survey of the characteristics of the development of both modern civilisation and regional cultures. This course also aims at fostering and understanding of trends in thought literature and art.
		Understanding Nature	A study aimed at building an awareness of natural realities and of mankind's dependence on nature, through consideration of the characteristics of nature from various points of view.

Figure 10.2

(2) Courses Offered

The University offers a total of 270 courses (786 credits). Of these 105 (279 credits) are currently being broadcast, with the rest planned for completion by 1988.

The courses have been divided into the following categories: fundamental subjects (study of which is intended to give students an overall view of their chosen area of study and to teach them how to recognise and look for solutions to academic problems), basic subjects (study of which should provide students with the necessary knowledge and study skills to enable them to go into their chosen area of study in greater depth), foreign language courses, health education courses, specialised subjects, interdisciplinary subjects. Of these, 40 courses will be accompanied by schooling at the study centres. The number of the courses in each area is as follows:

TABLE 10.1

Category	Planned No. of Courses (& units of credit)		No. of Courses at present (& units of credit)	
Fundamental Subjects	17	(35)	10	(21)
Basic Subjects	34	(104)	18	(55)
Foreign Languages	15	(48)	8	(26)
Health Education	2	(4)	2	(4)
Specialised Subjects				
Living & Welfare	26	(80)	9	(26)
Human Development & Education	32	(90)	11	(28)
Social & Economic Studies	32	(92)	13	(29)
Industry & Technology	32	(81)	11	(25)
Humanities	41	(104)	14	(28)
Understanding Nature	28	(93)	9	(27)
Interdisciplinary Subjects	11	(55)	—	—
TOTAL	270	(786)	105	(279)

System of Study

1. The system of study at the University of the Air comprises

lectures broadcast over radio or television, textbooks, guidance by correspondence, and classes at the study centres.

(1) Broadcast Lectures

During the 15 weeks of each semester, 2 credit courses broadcast 15 lectures (one a week, 45 minutes each), and 4-credit courses broadcast 30 lectures (two a week, 45 minutes each). Each course is broadcast on either radio or television. The lectures are rebroadcast, but in cases where a lecture is missed, students may go to the study centres to watch and/or listen to the lecture in the tape library.

(2) Textbooks

All courses broadcast are accompanied by textbooks, and the lectures and textbooks should be studied together. A textbook for a 2-credit course has about 100 pages.

(3) Guidance by Correspondence

After the eighth week of the semester, students are tested or asked to submit papers, and are evaluated on the basis of the results.

(4) Study Centre Classes

Classroom instruction is carried out at the study centres. In order to graduate, regular students must complete at least 20 credits of study centre classes. Each class lasts for two hours and fifteen minutes, and there are ten classes per course per semester. Students receive one credit if they attend five of the classes for one course.

The standard weekly load of study for the regular student who wishes to graduate in four years is as follows:

> broadcast lectures: 5 forty-five minute lectures; study of textbooks: 30 to 40 pages per course; attendance of study centre classes: once (2 hours and 15 minutes).

Student Classification, Enrolment Statistics

1. Student Classification

Regular students—Those students who enrol with the intention of graduating from the University of the Air.

Non-degree students who enrol for one semester—Those students who enrol for one semester for a particular course.

Non-degree students who enrol for one year—Those students who enrol for one year and take three or more courses in a particular area.

Special students—Those students who do not have the necessary qualifications to enter the university may enrol as "special students." After finishing 16 credits for courses selected from among the basic and fundamental subjects, they will be able to register as regular students. (In Japan, those who have not at least graduated from high school are not able to enter a college or university).

2. Enrolment Statistics

The students are adult working people, housewives, etc., who have a limited amount of time in their daily lives to set aside for study. The characteristics of the students are presented in Tables 10.2, 10.3 and 10.4.

Evaluating the Students' Work

Evaluation of students is done course by course, on the basis of guidance by correspondence and examinations which are the basis of credit.

Guidance by correspondence

1. During the semester, those students who are registered for a course receive questions from the course instructor.
2. The students write reports on the basis of these questions (or answers to them).
3. The course instructor evaluates the students on the basis of these reports (or answers) and returns them to the students.
4. If the students pass the Guidance by Correspondence, they are permitted to take the examination at the end of the semester which determines whether or not they will receive credit for the course.

Course examinations

1. At the end of the semester, course examinations are given at each of the study centres.
2. Those who have passed the Guidance by Correspondence are permitted to take an examination to determine if they are to receive credit for the course. The examination is taken at the study centre the students normally attend.
3. Students are evaluated by the course instructor on the basis of the results of the examination, and if they receive a sufficiently high grade, they pass. Credit is then given for the course.
4. Grading is as follows (A through C are passing grades):

—A 100–90
—B 89–80
—C 69–60
—D 59–50
—E 49–0

Table 10.2

CHARACTERISTICS OF THE STUDENTS: PROFESSION

	Total	Office Workers, bank clerks	Unemployed includes housewives	Government Employees	Private businessmen	*Self-	Teachers	Others
Total	17,038	6,195	5,503	2,198	674	556	433	1,479
Regular Student	8,157	3,052	2,264	1,280	302	248	194	817
Non-Degree Student (A)	5,891	2,072	2,176	652	196	192	184	419
Non-Degree Student (B)	1,768	633	680	166	60	56	53	120
Special Student	1,222	438	383	100	116	60	2	123

Table 10.3

CHARACTERISTICS OF THE STUDENTS: EDUCATIONAL BACKGROUND

	Total	Elementary School, Junior High School	Pre-war Elementary School	High School Pre-war Middle School	Junior College Technical School	College Graduate
Total	17,038	972	75	10,692	2,813	2,486
Regular Student	8,158	50	1	6,211	1,368	527
Non-Degree Student (A)	5,891	124	24	3,161	1,118	1,464
Non-Degree Student (B)	1,768	65	14	909	288	492
Special Student	1,222	733	36	411	39	3

Table 10.4

CHARACTERISTICS OF THE STUDENTS: SEX AND AGE

		Total	18–19	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	over 60
Total	Subtotal	17,038	710	1,997	2,038	2,404	2,783	2,239	1,917	1,267	722	961
	male	8,375	439	1,111	1,135	1,281	1,162	844	734	515	412	742
	female	8,663	271	886	903	1,123	1,621	1,395	1,183	752	310	219
Regular Student	Subtotal	8,157	529	1,253	1,027	1,237	1,431	1,099	851	443	149	138
	male	4,253	352	759	635	691	618	445	349	186	96	122
	female	3,094	177	494	392	546	813	654	502	257	53	16
Non-Degree Student (A)	Subtotal	5,891	100	507	732	853	954	777	735	505	277	451
	male	2,586	40	224	349	421	360	257	241	207	154	333
	female	3,305	60	283	383	432	594	520	494	298	123	118
Non-Degree Student (B)	Subtotal	1,768	31	144	205	231	279	223	218	158	109	170
	male	788	15	59	97	111	114	70	85	55	55	127
	female	980	16	85	108	120	165	153	133	103	54	43
Special Student	Subtotal	1,222	50	93	74	83	119	140	113	161	187	202
	male	748	32	63	54	58	70	72	59	67	107	160
	female	474	18	24	20	25	49	68	54	94	80	42

Table 10.5

CREDIT REQUIREMENTS FOR VARIOUS COURSES

Type of Course	Number of credits required	Number of credits requiring Study Centre classes	Further requirements
Fundamental and Basic Courses	36	6	To be divided among Humanities, Social Studies and Nature.
Foreign Language	8		Eight credits in one foreign language (the first foreign language).
Health & Physical Education	4	—	Three lecture course credits, one class credit.
Major and Interdisciplinary Courses	68	14	1) In addition to the first foreign language, 4 credits in a second foreign language or 4 credits from a designated group of advanced courses. 2) At least 30 credits in the student's major.
Thesis	8	—	Prerequisites: students must have been enrolled for at least 3 years and received at least 96 credits. Enrolment is for one academic year (three semesters).
Total	124	20	

Table 10.6

THE BUDGET FOR THE YEAR 1985

(in thousands of yen)

Income		Expenditures	
Income		Salaries	1,459,983
Tuition and Fees	749,000	Administrative Expenses	1,258,094
Other Income	127,849		
Donations for the Promotion of University Broadcast Education	103,500	University of the Air Operating Expenses	2,712,673
Miscellaneous Income	24,349	Student Recruitment	149,254
Subsidy		Preparation of Materials	1,488,156
National Subsidy	5,144,825	Educational Research	621,864
		Installation	453,399
Government Capital	313,235	Transmission Stations	380,660
		University of the Air Foundation Equipment	313,235
		Donation for the Promotion of University Broadcast Education	100,000
		Reserve Funds	110,264
Total	6,334,909	Total	6,334,909

Schooling

As for schooling, if the student's attendance is good, and if he or she studies well, and passes the final examination to receive credit for the broadcast course, then he or she is given credit for the schooling for that particular course.

Graduation

It is possible for regular students to graduate from the University of the Air after being enrolled for at least four years and receiving a total of at least 124 credits in stipulated areas. The details are given in Table 10.5.

Financial Affairs

The University of the Air Foundation established the University of the Air (including the Study Centres) and the Transmission Station. The majority of the funding for operations is supplied from the treasury of the Japanese Government.

Estimated income is based on governmental subsidies, capital from the national treasury, student enrolment and registration fees (business income), and from donations to the Endowment for the Promotion of Higher Education and profits on investments made by the University of the Air Foundation (external income).

Estimated expenditures are based upon salaries for employees (225 people, including the faculty), running operations for the University of the Air Foundation (including the University of the Air and the Transmission Station), expenses for building maintenance, student recruitment, the preparation of textbooks and broadcast lectures, for faculty research, for academic counselling, for equipment for the university, for operating expenses for the Transmission Stations, for support of the students at the Study Centres, and for Study Centre building maintenance.

The University of the Air began registering students in 1985. The budget for 1985 is given in Table 10.6.

Relation to the Government

1. The University of the Air was established by the University of the Air Foundation which is a special corporation.

The Government supervises the affairs of the University of the Air Foundation and of the university which it established. This includes supervision of the approval of the content of the broadcasts and of financial affairs and accounts. However, the Government does not directly supervise the University of the Air itself.

Every year, the University of the Air Foundation presents its planned operations and budget to the Ministry of Education and the Ministry of Posts and Telecommunications in order to receive their approval. It must also receive their approval for settlement of any questions involved.

2. As for the appointment of officers of administration, the Minister of Education appoints the President and Chairman of the Board of Directors of the University of the Air Foundation. The Chairman of the Board of Directors appoints the other Directors, with the approval of the Minister of Education. The appointment of the President of the University of the Air is made by the Minister of Education, upon the nomination of the Directors as based upon the decision of the Faculty Council. The President of the University of the Air becomes a Director of the University of the Air Foundation.

The Impact of the University of the Air upon the system of education in Japan

The University of the Air works in cooperation with both public and private universities. The full-time faculty, with the assistance of Visiting Professors and Associate Professors, and of part-time instructors, produces broadcast materials and textbooks and carries out schooling.

Registration of students began in April 1985, so it is difficult to measure the impact on the educational system at this time. However, we believe that the University of the Air will certainly have a great influence on the improvement of education, especially higher education, in Japan. Specific areas where influence is expected include mutual transfer of credits, promotion of mutual cooperation, the open nature of lectures, as with those broadcast over the University of the Air, integration of academic disciplines, influence towards the improvement of the content of lectures at other universities, and influence promoting flexibility within the system of higher education.

11

THE KOREA AIR AND CORRESPONDENCE UNIVERSITY

CHAN-DONG KIM

Introduction

The Republic of Korea occupies approximately 220,000 square kilometres of the peninsula on the north-east corner of Asia with a population in excess of 40 million and a density that is one of the world's highest—about 400 persons per square kilometre. It has evolved from a largely agrarian society, poorly endowed with natural resources, to a newly industrialised one in a short span of time. This rapid transformation has brought with it many far-reaching social changes, one of them being the expansion of educational opportunities at all levels. The Korea Air & Correspondence University is an institution created as a part of that expansion.

This report will begin with some of the educational events leading to the establishment of the Korea Air & Correspondence University and will proceed to its organisation, academic affairs, student affairs and finance. A summation of some of the problems and issues will round out the discussion.

An examination of the major problems in Korean education reveals that parallel with the dramatic growth in the economy has been the rapidly increasing student population. This student explosion was, and still is, the most critical problem in Korean education. From it, others emanate in a kind of ripple effect, such as classroom congestion, particularly in the elementary schools. In the larger cities, two daily school shifts have dealt with the problem temporarily. The government plans to split some of the large schools into smaller units, thus easing the overflow and eliminating the two shift scheduling of classes. Secondary education is faced with a similar problem now that compulsory, free middle school education is being extended. This, of course, leads to more students moving on into high school, bringing about the heated competition for entrance into higher education.

Distance education has been introduced into Korea as a major element of response to these growing needs for education. Its purpose is twofold: as a new educational avenue for the growing population of secondary school graduates and as part of the concept of lifelong education for all citizens at any point in their lifetime. The adult population of Korea has increasingly sought further education for a multitude of reasons: as a means of learning to cope with our changing society, to improve their working status, to resume an interrupted schooling and simply for enrichment. This newly emerging adult student group finds further education possible only when they are allowed to study at their own pace. Distance education constitutes a relatively new, cost-effective alternative for them and for the ascending numbers of secondary school graduates who are denied access to conventional universities because of the limited ability of these institutions to expand and accommodate the students.

In the light of these changing needs of the people, the 1980 amendment to the Korean constitution stipulates that the State will promote lifelong education and that every citizen has the right to enjoy an equal opportunity for education according to his ability. Thus, the air and correspondence educational system was established in Korea under these concepts of distance education and led to the founding of the Air & Correspondence University and high schools. It might also be said of the system that it offers higher education suitable for a new age because of its ability to adapt the latest mass-media techniques to the teaching forum.

Distance learning projects exist in Korea both in formal and non-formal education. Much of the non-formal distance education in Korea comes through the broadcast media and in work-related self-improvement seminars and workshops. The participation by non-government agencies in the development of distance education is expected to increase. Already, there are many private institutions in Korea preparing students to take such tests as the College Entrance Examination, the TOEFL, the GRE for graduate school, etc. Although regular class attendance has been the usual method of instruction, correspondence methods are being introduced. With the increasing use of VTRs, it is not unlikely that such course will eventually be produced on video cassettes. Far more significant, however, are the distance education projects in the field of formal education. Two such institutions, the Air & Correspondence High Schools and the Korea Air & Correspondence University, have developed side by side under differing organisational patterns.

In 1974, eleven Air & Correspondence High Schools were attached to existing conventional high schools throughout Korea. They provided the facilities and teachers for the classroom instruction that occurred every other Sunday. Within twelve years, the number of such schools had increased to 50, which enrolment had risen from 5,500 to 75,000. The system functions in collaboration with the Korean Educational Development Institute established to research and develop educational goals, content and methodology. They produce the media and self-instructional print material for the students as one of their many functions. Thus, 50 Air & Correspondence High Schools, though operating independently of each other, in conjunction with conventional schools, all rely on the same basic broadcasts, texts and evaluation material.

The Korea Air & Correspondence University (KACU) began much like the Air & Correspondence High Schools, attached to a parent organisation, Seoul National University. Then, as enrolment inflated to such proportions that distance education could no longer be contained administratively within the facilities of Seoul National University, they had to separate. When that happened, the Korea Air & Correspondence University was organised like its parent, as an independent teaching institution, no longer attached to any existing conventional university.

Perhaps the fact that the authority for approving the establishment of high schools resides with the Regional Boards of Education rather than the Ministry of Education in the Central Government as it does for universities, may have influenced the variation in organisation. Regardless of cause, the evolution of these two concurrent but diverse models of distance education, each one functioning well, leads to the conclusion that no one single mode can claim superiority over the other. Perhaps, what can be said is that circumstance and chance will likely dictate the model most appropriate for the time and place.

Organisation

The university began by offering two-year junior college courses in five departments. Nine years later, in 1981, it had grown to a five-year programme leading to the bachelor degree. The next year, 1982, saw it elevated to the status of an independent national university with nine departments, and by 1984, the number had grown to thirteen diverse programmes.

The central organisation is composed of the thirteen departments, the Division of Academic Affairs and the Division of Student Affairs. Next comes the Division of General Administration, in charge of accounting, procurement and maintenance. In addition, KACU is assisted by several affiliated institutions: the Student Guidance Centre, the Distance Education Research Centre, the Computer Processing Centre, the Media Development Centre, the library, the University Newspaper Press, the KACU Publishing Unit and the Management Committee.

The Student Guidance Centre helps students by offering career counselling as well as guidance of a personal nature and carries out related research.

The Distance Education Research Centre is responsible for gathering and analysing information for improving the distance educational system.

The Education Media Development Centre governs the radio and television studios charged with the production and distribution of audio and video cassettes developed for broadcast, for use at the regional centres and for individuals.

The KACU Library began in 1972 as an audio library, but by 1982, it had undergone an organisational transformation into a multipurpose university library.

The University Newspaper Unit publishes 160,000 copies, 44 times a year and mails them directly to every student regardless of locality. Thus,the newspaper furnishes an invaluable link between the university and the students. Stable lines of communication are maintained by carrying salient information concerning administrative and student activities, as well as broadcast schedules, study guides and a variety of special articles.

The KACU Publishing Department has the special task of publishing textbooks and supplementary reading material. Cassette reproduction and distribution are also among the duties of this department.

The Computer Processing Centre is responsible for automating the vast amount of clerical work involved with such a large student body. The data-processing room is equipped with personal and micro computers, in addition to its main all-purpose computers. Here computerised information concerning registrations, grades and graduations is stored and made available at the touch of a button. By 1988, the main campus will be electronically linked to the computers in the regional centres.

The Management Committee functions in an advisory capacity regarding legal matters, the development of long-term projects and other decision-making concerns, as they may occur. The members of the committee are selected from among men well-reputed in their various fields and having professional knowledge or an interest in distance education.

A major innovation of the university is the network of 12 regional and 23 local study centres located throughout Korea for the convenience of students concentrated in those areas. They are staffed by a Director, a Teaching Assistant, an Administrator and two Librarians, plus ancillary staff.

One of the most important functions of the centres is to hold part of the schooling, and in so doing, they also serve as a bridge between the students and the cooperating universities where the rest of the schooling is held. The direction of a regional centre must also enlist resident Professors and Assistants to teach and counsel students, as well as give special enrichment lectures. But, perhaps, their key role is that the centres provide students in the vicinity with a place of their own for study and for the extra-curricular activities of the local students association. The KACU's branch libraries are also under the management of the regional and local study centres. Equipped with V or T Rs, a language lab and cassette duplicating machines, the branch libraries fulfil the study needs of the regional students.

A trained counsellor and more academic staff would be very valuable in dealing with the large number of student queries. Most desirable, of course, would be to have a level of support high enough to assign students individually to members of the counselling force. But it would be costly and require a substantially larger budget. A reasonable compromise might be to appoint professors representing each of the thirteen departments to all of the regional centres to ensure more professional help at the regional level.

A significant organisation of which the university is justifiably proud is the KACU *Student Association*, organised at the national level. Through academic, artistic and sporting activities, it builds a sense of belonging and self-worth. Although the main office is on the Seoul campus, each local association is free to sponsor such events as guest lectures, art exhibitions, speech contests, dramatic and sporting activities and to organise study groups. Thus, the students themselves contribute to the quality of their own learning environment.

Academic Affairs

The educational area containing the thirteen departments is divided into the liberal arts, the social sciences, the natural sciences and education. The liberal arts comprise Korean studies, English, Chinese and French languages, while the social sciences include law, public administration, economics and business administration. The natural sciences consist of agriculture, home economics, computer science and statistics. The educational major separates into elementary education and early childhood development, the only remaining junior college course.

In the order of highest demand, the courses begin with public administration, followed by business administration, agriculture, home economics, computer science, elementary education, law, economics, English, Chinese, French, Korean studies and early childhood education.

For courses like computer science, agriculture and home economics, requiring experimental and practical work, the university tries to provide the necessary time during the schooling period, and soon, students will be furnished with experiment kits designed to ensure a hand-on training as well. Nevertheless, as they are now designed, the amount of experimental work offered is insufficient and presses for improvement.

To understand how the departments operate within the KACU's educational system, one must understand just how different the system is from conventional universities. Although the curricula may be similar, in teaching methods they are markedly dissimilar, the basis being a pragmatic approach to content and the independent study techniques of open learning. They are rooted in the conviction that the students of distance education are highly motivated to engage in independent study. The major distinctions in the teaching-learning process are found in the broadcast lectures and the self-study correspondence lessons.

From matriculation to graduation, the educational system adheres to the following pattern. Admission is limited to high school graduates or to those who have passed the high school equivalency examination. They are selected on the basis of their high school academic standing within the overall admission quota set by the university.

Due to a high dropout rate in the early stages, students who have completed a minimum of two years at a junior college elsewhere are newly admitted to the 2nd and 3rd year classes, on the basis of their academic records. Students register for fifteen credits a semester, three credits per subject. The entire process is the result of a variety of activities that include assignments, radio and television lectures, written assignments, the schoolings, examinations and the newspaper.

The lectures are usually conducted by the authors of the textbooks and broadcast over the educational radio network of the Korean Broadcasting System (KBS). Broadcasting runs from 4 to 7 a.m. in the morning, 4 to 5 p.m. in the afternoon, 6 to 7 p.m. in the early evening and 11 p.m. to 1 a.m. in the late evening, for a total of seven hours per day. Television lectures are broadcast for one hour a week from 7 to 8 a.m. on Sunday morning. Broadcast lectures for each subject consist of twenty half-hour units. Students who miss the broadcasts can visit the library of the regional or local Study Centre where copies of the audio and video tapes are available.

At the end of each semester, students are required to attend the summer and winter schooling. Schoolings are held at 50 cooperating universities and colleges in the region, for a total of five days each. During this period the Professors hold classes to review material from the broadcast lectures, to provide laboratory work and to give students advice for self-study. Face-to-face meetings between students and Professors are further increased through special lectures and lecture tours. In summary, the media employed in teaching the courses are:

(a) Written material : Correspondence texts, supplementary materials and the university newspaper.
(b) Audio-visual material : Radio and television broadcasts, audio and video cassettes.
(c) Schooling : Compulsory sessions held at cooperating institutions for testing, lectures and practical or experimental work.
(d) Special lectures : Professors and special guest Lecturers.

Students are required to submit several reports on assigned subjects and readings every semester. These reports are sent to the teaching staff for correction and comment and returned for self-study and reviews. The results of these assignments are used for evaluation of the student's overall academic performance. In the past, students have been required to submit an assignment written at home and turned in for grading and written comment by the Professor. In order to offset the temptation of some students to plagiarise the work of others, the writing of the report takes place now on the first day of the schooling under staff supervision.

The student's academic work is also evaluated by means of two examinations, as well as the written assignments. The first-part examination is an objective test covering the broadcast lectures and administered directly by the KACU. The second-part examination is a subjective test conducted and evaluated by the Professors of the cooperating institutions where the schooling has taken place.

Bachelor degrees are awarded to students who successfully complete the course work of 140 or more credits and pass the qualifying examination for graduation within ten years after matriculation. To those students completing the junior college course with 80 or more credit points within five years after matriculation, a diploma is presented.

The core faculty responsible for the conduct of this academic programme is made up of approximately 70 full-time Professors and 40 assistants aided by the part-time help of adjunct Professors from the cooperating institutions. The demands of distance education on the teaching staff are perhaps more varied than that of conventional institutions. The schoolings often require evening or weekend duty that may also involve a trip to one of the regional centres. Many faculty members are also involved in the actual text preparation, in addition to their broadcast lectures.

As the need for more and improved media production escalates, the faculty is being called upon to work cooperatively as a team with other staff members that may include such a diverse group as engineers, camera crew, artists and producers. All too often, disagreements have a divisive effect, resulting in frayed nerves and damaged pride, and ultimately a flawed production. The team efforts required for the production of good media material might be likened to that of a symphony orchestra, where every musician might be a virtuoso player in his own right, yet he must submit his talents to the will of the conductor who blends them together into a harmonious whole.

Like other distance teaching institutions around the world, the university is determined never to become a mere para-educational institution, inferior to regular universities. Thus, it steadfastly tries to maintain strict academic standards. Nevertheless, it should be noted that the goal of education is not confined to the mere acquisition of knowledge alone. The necessary socialisation that comes from classroom interaction is perhaps one of the most difficult ingredients for distance education to achieve. Although the recognition of this shortcoming has been largely from the point of view of the student, its effects are harmful to the Professors as well. Just as students of distance education must learn essentially in isolation, so, too, the Professors cannot help but prepare and teach their lessons in isolation. The stimulation resulting from interaction is as indispensable for a creative and caring faculty, as for students. Teaching, after all, is a two-way street where both must give and take.

Student Affairs

The Korea Air & Correspondence University first opened its doors in 1972 to 12,000 students in five departments. By 1981, enrolment had reached 48,000. Then, in 1982, something quite remarkable happened. In a single year, with the advent of independence and the new 5-year degree programme, enrolment and the number of departments nearly doubled to 90,000 students in nine departments.

Continuing the rapid climb, by 1985 there were thirteen departments and a student body numbering more than 150,000. This stunning growth had made KACU the largest institution of higher education in the country. The current admittance policy is one of restraint, however, holding the line at 150,000. Despite the enormous rise in enrolment, all applicants cannot be admitted. The university sets the admission quota according to its capacity and the applicants always far exceed the quota.

The KACU has produced almost 58,000 graduates from both its junior college and 5-year course. Of that number, approximately 20,000 have received the bachelor degree since 1985, when the first graduation from the new programme took place. This year, another 10,000 graduates expect to be added to that figure. It is difficult to assess their employability, since about 80 per cent of our students are already gainfully employed. The largest number, 36 per cent, goes to business, while teachers, and government officials are each approximately 20 per cent. The students come in all ages, but at present the majority, about 63 per cent, are between 26 and 40. Students over 41 still register better than 7 per cent.

Analysis discloses that despite the number or length of interruptions in education, the general ability of KACU students is definitely not inferior to that of other university students. Encouraged by that fact, the university has steadfastly tried to maintain strict academic standards. It is claimed that the high dropout rate may in part reflect these stringent efforts. This contention is perhaps best evidenced by the quality of KACU graduates, many of whom are admitted to the graduate schools of conventional universities in competition with their own graduates. Moreover, the success of other KACU students is also notable in passing the various qualifying examinations necessary for such professions as law, accounting, home economics, kindergarten supervisors, etc.

Finance

Turning to the financial side of the operation, the KACU spent the equivalent of approximately US$ 17,000,000 in 1985 for its total operation. About 14 per cent of the expenses was for broadcasting, while around 12 per cent went to the cooperating institutions. Approximately 32 per cent of the total budget is subsidised by the government, the rest comes from student fees. The total cost of education per student at the KACU in 1985 was about US$ 125, or roughly one-tenth of the cost at a conventional university. This significant demonstration of distance teaching's cost-effectiveness is due mainly to the close collaboration between the KACU and its cooperating institutions which provide the university with the dominant part of the required Professors and classrooms. The importance of this relationship cannot be emphasised too strongly. Were the KACU to try to maintain the buildings and faculty necessary for the schooling on a year round basis, educational costs would inflate enormously, putting them on a par with conventional schools.

Obtaining the cooperation of these institutions for the schooling may follow one of several different patterns, depending on the circumstances. For example, the size of each country and the language diversity within the country can be taken as the most important factors influencing the choice of models. If the country is not large in area and is of one language, then the KACU model is appropriate. In other words, the distance teaching institution may be organised as a single entity, making use of the conventional schools in the needed regions on an ad hoc contractual basis. However, if the country is vast in area and if diverse languages are used, the situation may not warrant the use of so simple a model.

These circumstances may suggest following a plan closer to the Air & Correspondence High Schools in which distance teaching is attached and becomes a division of a conventional regional school. In any case, it must be emphasised that securing the cooperation of conventional institutions is one of the surest ways of making distance teaching cost-effective.

The centralised mass production of standardised learning materials, such as textbooks and audio and video cassettes for a large student population, further reduces educational costs, by benefiting from the economies of scale. Thus, distance teaching can provide education at a comparatively low cost to as many people as the mass media can reach.

Problems and Issues

Having covered in the previous segment the details about Korean distance education, this portion of the study will focus primarily on the issues that may also be challenging other distance education institutions for solution.

(a) Media Production: Printed Material

As in most distance teaching universities, the primary medium of instruction at the Korea Air & Correspondence University is printed material. Some of the correspondence textbooks are developed by the Professors at the KACU, but much material is produced by the external staff from Seoul National University and other cooperating institutions. This is not surprising, given the relatively small academic staff at the KACU.

This method of producing texts is undoubtedly more economical than one in which most of the material is written by full-time internal academics. A heavy reliance on external authors, however, often produces its own set of difficulties in communication. Moreover, the final product is frequently insufficiently geared to the needs of distance learners. In some cases, many of the features of good self-instructional material, such as course and chapter objectives, summaries, examples, self-assessment questions, glossaries, concept lists, etc., are included. But in too many cases these features are lacking. Furthermore, the problem of transforming the contributions of outside writers into distance teaching texts raises the difficult issue of getting agreement from the authors to allow changes to be made in their material.

A prior contractual agreement on changes is worth consideration, as well as a fuller briefing on the needs and expectations for external contributors. It is also crucial that at least one member of the full-time staff has the responsibility and the time for coordinating the activities on each course, and for working on the final drafts. This coordinating task should include actual meetings of all who are committed, so that the production of the course material becomes a more cooperative exercise than currently seems to be the case.

It has become increasingly clear that while many of the full-time staff are familiar with what are normally regarded as the characteristics of effective self-study methods, others have less knowledge and experience with the techniques involved. Therefore, a policy to hold more staff development meetings for those full-time members who are less familiar with the process of devising self-instructional material should be adopted. Moreover, the appointment of an educational specialist to coordinate these policies should be of high priority.

Finally, a system for monitoring the teaching quality of the texts, before and during the course presentation, needs to be developed and implemented. Such a system should be mandatory whenever a course or text is being used for the first time.

(b) Audio and Video Material

At present, all the broadcasts must be produced by KBS. One of the current impediments to improved educational media is a lack of educational specialists at KBS. The producers are anxious to expedite their educational production as quickly as possible. It is not in their interest to introduce costly or time-consuming methods. It is believed to be in the best interest of the university to seek greater independence from professional broadcasting in order to facilitate the development of programming designed and tailored to the needs of distance education with the help of its own educational specialists.

Audio material is mass produced and distributed to the regional study centres for use by students who were unable to hear or view the original programmes. The Educational Media Development Centre plans and produces the audio and video cassettes which are used either for broadcast replacement or for augmenting the broadcast courses. The audio-visual input, however, varies considerably from course to course. Moreover, the various components included in particular courses can vary from semester to semester.

Greater consistency can be achieved through planned consultations with an education specialist.

(c) Broadcast Lectures

The limited air-time made available in the early morning, afternoon, evening and late at night, is not always convenient to the students. The Korea Air & Correspondence University not only needs more broadcast hours, it also needs to control its own broadcast scheduling for maximum efficiency and effectiveness. An exclusive educational broadcast channel for the university should be a goal for the future.

(d) Dropout

As with most distance education universities, a relatively high dropout rate is a source of constant concern. Approximately 50 per cent of the 1st year students dropout of the university before they reach their 2nd year, while 2nd year students show the next highest percentagae.

A recent survey of KACU students highlighted "maladjustment to self-learning methods" as one of the major negative factors. The production of study skills packages related to each department's courses might considerably alleviate this particular factor.

The timing of schoolings during a student's academic career should also be reviewed for the possibility of putting greater emphasis on a "front-end" model, placing the majority of schoolings on the 1st and 2nd year courses, since dropout is most likely to occur in the earlier years of study, before students have developed the skills of independent learning.

At the end of each semester, students attend a five-day schooling on many of their courses. The schooling is held at the 50 cooperating institutions during their vacation periods, as well as at the regional study centres and the main campus. A recent study showed that difficulty in obtaining permission to attend these sessions was one of the major factors affecting dropout. The university decision to offer an alternative, mid-term evening or weekend schooling should reduce the seriousness of this problem.

Many employed students find the workload of five or six required courses more than they can handle, and feel forced to give up. The possibility of allowing students to opt for fewer courses, in order to reduce this problem, needs to be explored, even though an increased flexibility in student choice might complicate the system as it now operates.

However, without appearing to justify the dropping-out, perhaps it may be said that at times it actually serves the function of a self-monitoring system. Some students may find the workload involved more than they can handle, while others may find it too difficult to meet the strict academic standards the KACU strives to maintain. It is far better for them to discover the inevitable harsh realities in the anonymity of a distance education course, than in a conventional classroom confrontation with their peers.

(e) Cooperating Institutions

The Korea Air & Correspondence University owes much of its cost-effectiveness to the tremendous contribution of the cooperating institutions. Were the KACU to maintain, on a year-round basis, the building and faculty necessary to carry on the schooling programme, the expense of distance education might nearly equal that of conventional education.

Nevertheless, the cooperating faculties are not members of the KACU family, a fact that inevitably limits their eagerness and devotion. This feeling cannot help but be transmitted to the KACU students, if only in a subconscious way. The inclination of these Professors is understandably to favour the conventional educational method. The university plans to hold seminars at each of the cooperating institutions aimed at heightening the enthusiasm of the part-time Professors by better orienting them to the distinctly different style of distance teaching and the problems inherent therein. The seminars should stem the tendency to teach and write for distance education as they do for their conventional classes. They should also encourage greater care in adapting materials and methods to the special needs of the KACU students.

(f) Experimental and Practical Work

Courses like computer science, agriculture and home economics, requiring experimental and practical work, pose another kind of problem. The university is providing the practical work time during the schooling period, and soon students will be furnished with experiment kits, designed to ensure a hands-on training as well.

Nevertheless, the amount of experimental and practical work requisite in some of the technical fields is simply more than can be accomplished either in the schooling hours or with the help of experiment kits. However well the teaching efforts may be executed, the barriers to technological training by distance teaching methodologies can hardly be surmounted. The judgement in Korea, that distance teaching falls short of producing well qualified engineers and other technologists, has introduced a new mode of lifelong education in the area of technical education.

In March 1982, the Korean Government founded the Kyonggi Open University as a school of engineering. Since that time, six other similar schools have opened throughout the country. These open universities in Korea are not distance educational institutions as many open universities are. Rather, they follow the teaching methods of conventional universities which necessitate attendance throughout the semester. The 'openness' is found in the lack of age restriction and in the flexibility students have in choosing to attend day or evening classes, as their schedule permits, in choosing the number of credits per semester and in the unlimited time they have to complete their education. Those who complete the bachelor programme successfully and pass the graduation examination are awarded the degree of a Bachelor of Engineering in the fields of mechanical engineering, mechanical design, civil engineering, architectural engineering, electrical engineering, electronic engineering, chemical engineering, computer science, environmental engineering, die and mould design, industrial safety engineering and industrial engineering. Thus, the open universities in Korea are more likely to ensure sufficient experimental practical work experience for the technological courses of lifelong education.

(g) Whole Man Education

Distance education may not be inferior to conventional education in giving knowledge, but it definitely falls short in the realm of cultivating a well rounded personality, essential for the education of the whole man. Education is not only for specific knowledge but for imparting high ethical and moral standards as well.

Character building in the schools is possible mainly through the direct interaction between teachers and students and among the students themselves. This shortcoming of distance teaching must never be forgotten, and every means must be tapped to minimise its deleterious effects by using all of the interactive components of distance teaching. While the period of the schooling should be extended to the greatest extent possible, the interactive elements are perhaps closer at hand through the use of newly developed electronic media.

Interaction with students could be augmented enormously by linking the main campus to the regional centres by means of electronic video equipment. Once in place, such a set-up would allow face-to-face video-conferences between students gathered at the regional centres and Professors on the main campus. Then, students could respond with on-the-spot questions to lectures and receive instant feedback, interacting as if they were all together in a single classroom. Since the essence of humanity is interdependence, this quality should be injected into the distance learning process whenever and wherever possible.

Conclusion

In the last quarter of this century, the world has observed a remarkable metamorphosis in Korea's socio-economic development, from a largely agrarian society, small and bequeathed with few natural resources, into an industrialised, modern society. This development has brought with it profound changes in her societal structure.

Hand in hand with the economic progress have come the educational advances. Through increased investments in Korea's human resources, a well-spring has been tapped that promises enduring gains in all areas of human development, technical, cultural, economic, *ad infinitum*. The people's intense desire for education and personal improvement is wisely recognised by the government, as perhaps Korea's greatest strength. To this end, education plays a prime role in her continuing growth.

A brief scan of the development of education in Korea discloses a system that has significantly expanded on all levels. Notwithstanding, some major issues still exist. One of the overriding problems at the elementary and secondary levels is that of classroom shortages, overcrowding and inadequate facilities. At the level of higher education, students clamour for admittance and space. Steps to close the gaps between curricula and the needs of industry, between the social classes and opportunities for higher education, and to bring the qualitative level of education on a par with the quantitative level, are currently in progress.

Distance education was one of the provisions introduced to provide the increasing number of secondary graduates with a new avenue for higher education to fulfil the promise of lifelong education by widening the opportunities of higher education for the emerging adult clientele. The two distance education enterprises in Korea are the Air & Correspondence High Schools and the Korea Air & Correspondence University. As indicated by their titles, education is heavily dependent upon broadcast and other forms of educational media as its main source of instruction.

Although the aims and methods of these two systems may be similar, at the organisational level they are not same. The high schools are actually a division of the regional schools, whereas the university is complete in and of itself. The university is also making use of regional facilities and instructors, but on an *ad hoc* contractual basis, not as an attached division of the regional institutions. Whether by contract or attachment, it is the administrative strategy which is credited with being the major cost-cutting factor in air and correspondence teaching.

The Korea Air & Correspondence University has been in a constant state of adjustment in order to meet the needs of the university and its student body. To fulfil the need of students for a place to study and to meet, the regional centres were given priority. And to satisfy the need for personal contact between Professors and students, the schooling was created.

Distance education in Korea has, thus far, achieved an impressive quantitative growth. That growth must now be matched by an equally impressive qualitative rise through better use of the mass media. Modern distance education is an innovative way of providing higher education. In order to keep up with its own reputation, its educators must continue to let innovation be the order of the day, by staying alert to change and by being flexible and daring enough to try on new notions.

12

THE ALLAMA IQBAL OPEN UNIVERSITY

P. SATYANARAYANA
AND
B.N. KOUL

Special Features

The Allama Open University (AIOU) is a unique distance teaching institution. Besides being the oldest in South Asia, the university has several novel and interesting features.

It offers courses of varying lengths and type—from the matric to the Master's level. Courses similar to that of the AIOU are not available in many distance universities in the world. The university cooperates and collaborates with a number of national and international agencies. It supplements, supports and reinforces extension service provided by a number of provincial and federal government agencies in Pakistan. It runs a number of programmes in teacher education and vocational education sponsored by the government. Besides, Arabic and Islamic studies are promoted by the university. Certain compulsory courses on Islamiat are run on the direction of the President of the country. Unlike many open universities, the AIOU had undertaken a variety of projects sponsored and funded by different national and international agencies. It provides residential programmes and organises research through a specially set up agency to raise Islamic consciousness among Muslims in South Asia. Its programmes are a blend of religious studies and modern areas such as business administration, mass communications and information science.

The AIOU is broadly modelled on the British Open University with the active support of the latter. It has made a great impact on the educational scene of Pakistan. Its contribution to the educational development of the country has been considerable and well recognised.

Origin

The Islamic Republic of Pakistan is the ninth most populous country in the world. Its population, which was 97.67 million in mid-1986 is growing at the rate of 3.2 per cent per annum. The growth rate of population in Pakistan is the highest in South Asia. Educational facilities already available in the country failed to keep pace with such an increase in population. Consequently, the level of education development in Pakistan has not been satisfactory. The overall literacy rate in 1981 was 26.2 per cent. The female literacy rate was 16 per cent. The rural female literacy rate was 7.3 per cent. Successive plans have focused on the promotion of literacy levels by accelerating primary education and by functional literacy campaigns (Planning Commission, 1983:352). Under the Prime Minister's 5-Point Programme, efforts are being made to increase the literacy rate to 50 per cent. Specially designed radio and TV programmes are used for achieving this goal.

The participation rate at various educational levels is lower than the international average. Even in comparison with other developing countries, such participation in Pakistan is very low (Bhatti, 1986:3). The participation rate at the primary level is only 49 per cent as against 62 per cent in Bangladesh, 67 per cent in India and 91 per cent in Nepal. The Sixth Five-Year plan aims at raising the participation rate from 49 per cent to 75 per cent. The participation rate at the secondary stage, too, is low; it is 8 per cent. In India it is 15 per cent, in Iran 21 per cent, in Turkey 24 per cent and in the UAR 30 per cent. The position of higher education is even worse. The participation rate is as low as only 2 per cent. It is probably one of the lowest in South Asia. Though there has been a considerable increase in the number of colleges and universities, as well as in the enrolment of students and number of teachers over the years, the facilities for higher education are not available to more than 5 per cent of the relevant age group (18 to 23 years).

To raise the educational levels of the people, the Government of Pakistan has been designing and implementing new programmes from time to time. Sucessive plans have focused on the spread of education to larger sections of the population. But scarcity of resources and the narrowness of the formal system of education have become limiting factors in the desired changes in the educational system of the country. In its search for new systems to widen the access to education for different sections of the society, the government found distance education an innovative and highly useful system to supplement the formal education system which, as said above, is unable to meet the ever increasing educational demands of the people. Distance education, as such, is not totally new to the country. In its earlier forms of external studies and correspondence education, distance education existed in the country, but its scope, objectives and methodology were narrow and limited. Distance education through the open university system was thought to be the most appropriate system to meet, to a great extent, the demand for wider educational opportunities. Influenced by the British Open University which was founded in 1969, the educational planners initiated steps to launch an open university in the early seventies.

The Education Policy (1972-80) was the first official document to indicate the nature and utility of an open universtiy. It envisaged an open university system to provide part-time educational facilities through various distance education modes, in such fields and subjects as the training of 'rural improvement' and community development activities (Ministry of Education, 1972:22).

In pursuance of the provisions of the Educational Policy (1972-80), the National Assembly passed the enabling Act in May 1974, and the Allama Iqbal Open University (then named People's Open University) came into existence in June 1974. The main objectives of the university as enunciated in the Act are:

(a) to provide facilities to people who cannot leave their homes and jobs, in such manner as it may determine;
(b) to provide such facilities to the masses for their educational uplift as it may determine;
(c) to provide facilities for the training of teachers in such manner as it may determine;
(d) to provide for instruction in such branches of learning, technology or vocation as it may deem fit, and to make provision for research and for the advancement and dissemination of knowledge in such manner as it may determine; and
(e) to hold, examinations, and to award, confer degrees, diplomas, certificates and other academic distinctions (Allama, 1985:3).

The Fifth Five-Year Plan, 1978-83 categorically stated that the AIOU would employ multi-media distance learning techniques to offer in-service training courses for about 200,000 primary and middle school teachers, general foundation courses for 40,000 students and functional education courses to cover 240,000 adults.

The importance attached to the AIOU and the determination to make it a success by the President of Pakistan in his first convocation address: "I believe the (Allama Iqbal Open) university is still passing through an experimental phase. However, I sincerely think that no matter what happens, this experiment ought to succeed" (AIOU, 1983:5).

Organisation

The Organisational Chart is presented as Figure 12.1. The Chief Executive of the university is the Vice-Chancellor who works under the direction of the Executive Council and the Academic Council.

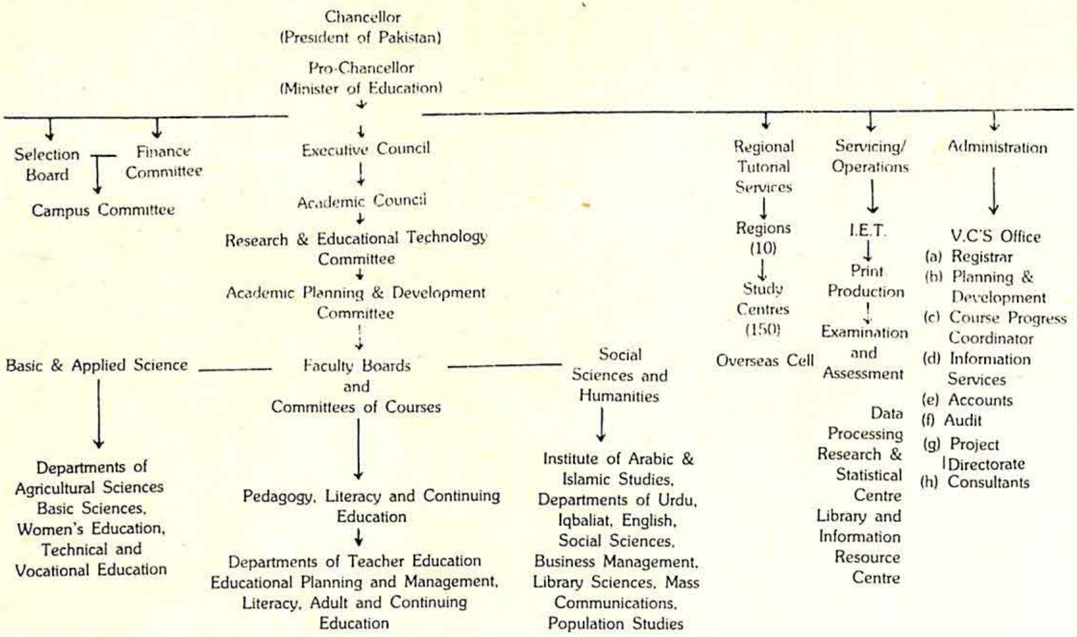
Academically, the university consists of three faculties. Each faculty is headed by a Dean, who performs both the academic and administrative functions. The three faculties and the departments within them are as follows:

1) *Faculty of Basic and Applied Sciences:* This faculty includes the departments of (i) Agricultural Sciences, (ii) Basic Sciences, (iii) Technical and Vocational Education and (iv) Women's Education.
2) *Faculty of Social Sciences and Humanities:* This faculty comprises the departments of (i) Urdu, (ii) Iqbaliat (study of Iqbal, the famous philosopher-poet), (iii) Business Management, (iv) Library and Information Sciences, (v) Arabic and Islamic Studies, (vi) English, (vii) Social Sciences and (viii) Mass Communication.
3) *Faculty of Education:* This faculty consists of the departments of (i) Educational Planning and Management, (ii) Teacher Education, (iii) Literacy, Adult and Continuing Education, and (iv) Distance and Non-Formal Education.

Besides the faculties, there are other bodies to perform a variety of academic and administrative duties. There are also a few statutory structures like the Selection Board, the Finance Committee, etc.

Courses are planned and developed by the Committees of Courses and Faculty Boards at the department and faculty levels respectively. The proposals for new courses originate from the Departmental Course Committees and then go to the Faculty Boards. Once they are approved by the Faculty Boards, they are placed before the Academic Planning and Development Committee and the Research and the Technology Committee. After obtaining approval of these committees, the proposals go before the Academic Council and then the Executive Council for final consideration and approval. The flow chart depicting the process of course design is given in Figure 12.2..

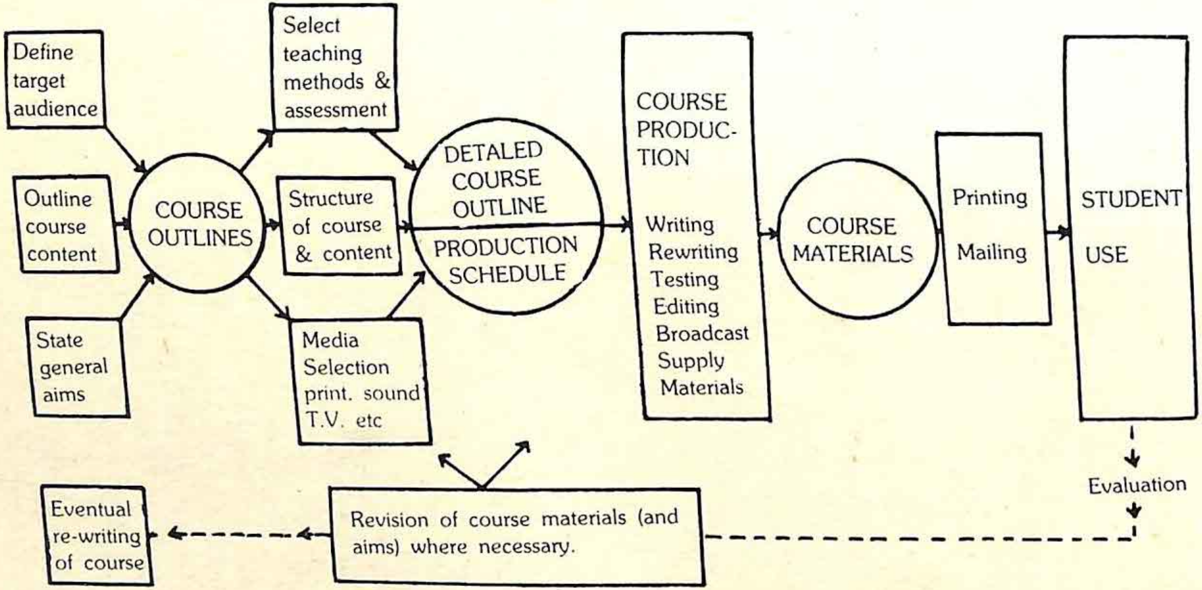
Figure 12.1
ORGANISATIONAL CHART
ALLAMA IQBAL OPEN UNIVERSITY


Chancellor
(President of Pakistan)
Pro-Chancellor
(Minister of Education)
Selection Board
Finance Committee
Campus Committee
Executive Council
Academic Council
Research & Educational Technology Committee
Academic Planning & Development Committee
Faculty Boards and Committees of Courses
Basic & Applied Science
Departments of Agricultural Sciences Basic Sciences, Women's Education, Technical and Vocational Education
Pedagogy, Literacy and Continuing Education
Departments of Teacher Education Educational Planning and Management, Literacy, Adult and Continuing Education
Social Sciences and Humanities
Institute of Arabic & Islamic Studies, Departments of Urdu, Iqbaliat, English, Social Sciences, Business Management, Library Sciences, Mass Communications, Population Studies
Regional Tutorial Services
Regions (10)
Study Centres (150)
Overseas Cell
Servicing/ Operations
I.E.T.
Print Production
Examination and Assessment
Data Processing Research & Statistical Centre
Library and Information Resource Centre
Administration
V.C'S Office
(a) Registrar
(b) Planning & Development
(c) Course Progress Coordinator
(d) Information Services
(e) Accounts
(f) Audit
(g) Project Directorate
(h) Consultants

Source: G.A. Allana, Distance Education System and the Role of Allama Iqbal Open University, Islamabad, 1985, P.69.

Figure 12.2

COURSE DESIGN: Flow Chart



Source: AIOU: The First Ten Years. 1975–85. p.30.

Instructional System

The university has adopted a multi-media instructional system, the main components of which are:

1) correspondence materials including self-learning study units and supplementary study materials;
2) radio and television broadcasts;
3) non-broadcast media including slides, audio cassettes, flip charts, and leaflets;
4) periodical tutorial instruction and guidance at study centres;
5) group training workshops for advanced level courses/ programmes; and
6) courses assignments and their assessment and seminar and semester-end examinations (Figure 12.3).

Programmes

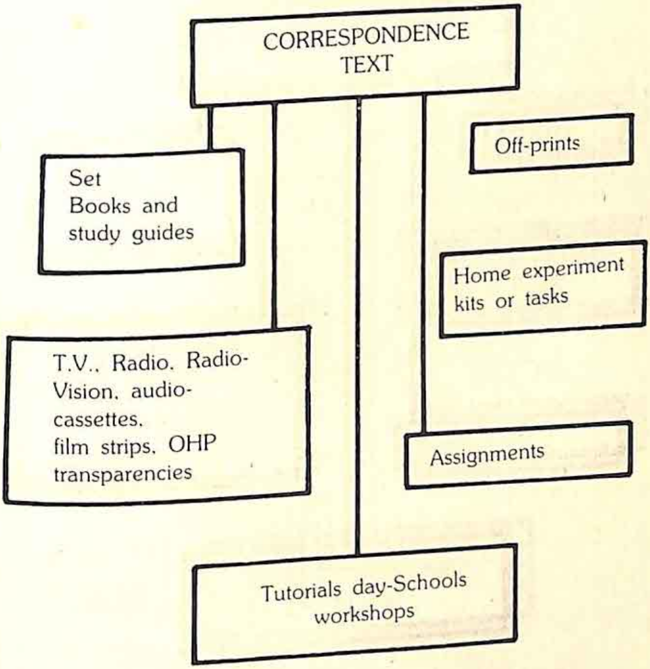
The AIOU is the only open university in the world which runs a variety of programmes from the lowest to the highest level. Generally, open universities are concerned with higher education at the graduate level. The AIOU is an exception and has earned the reputation of a unique distance education institution by offering a wide range of courses of different levels, lengths and types (Figure 12.4).

1) M.A./Diploma Programme in Educational Planning and Management
2) M.Sc. Pakistan Studies Programme
3) Master in Business Administration (M.B.A.)
4) B.A Programme with different clusters in
    (i) International Marketing
    (ii) Commerce
    (iii) Population Studies and
    (iv) Language and Literature
5) International Programme
6) Teacher Education Programme at various levels
7) Secondary School Leaving Certificate (Matric)
8) Basic Functional Education Programme (B.F.E.P.).

The university started with only five courses in 1975-76. By 1979-80, the number of courses increased to 32 and by 1986, the number rose to 104. The number of courses offered by the university in 1986 is shown in Table 12.1

Figure 12.3

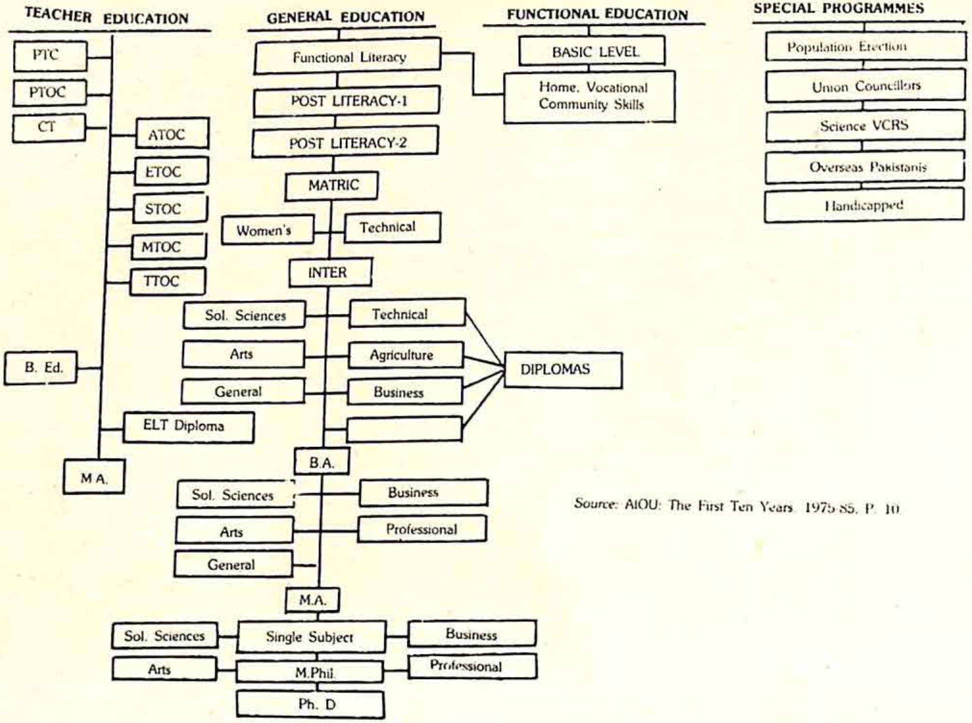
THE COMPONENTS OF THE A I O U TEACHING SYSTEM


CORRESPONDENCE TEXT
Set Books and study guides
T.V., Radio, Radio-Vision, audio-cassettes, film strips, OHP transparencies
Off-prints
Home experiment kits or tasks
Assignments
Tutorials day-Schools workshops

Source: AIOU: The First Ten Years, 1975-85, P. 10.

Figure 12.4

ALLAMA IQBAL OPEN UNIVERSITY
COURSE PROGRAMME OUTLINE



Source: AIOU: The First Ten Years 1975-85, P. 10

COURSES OFFERED: (CATEGORY-WISE) **Table 12.1**

Category	No. Of Courses
Basic Functional	5
Functional Non-credit	9
Matric	11
Intermediate	22
B.A	25
Teacher Training	14
M.A. (EPM)	10
Campus Courses in Shorthand & Typing in Urdu & English	8
	104

(Buksh, 1986:34).

The university started with an enrolment of 900 students. During the April 1986 semester, the number of students was 64,651 as indicated below: (Table 12.2)

LEVEL-WISE ENROLMENT IN APRIL 1986 SEMESTER Table 12.2

S.NO.	Courses/Level	Enrolment
1.	Functional Courses (non-credit)	3412
2.	Functional Courses (credit) F.A.	5131
3.	Functional Education (B.A.)	2824
4.	General Education (F.A.)	21922
5.	General Education (B.A.)	15569
6.	Arabic Teachers Orientation Course	1072
7.	Diploma in English (Post Graduate)	57
8.	Teacher Education	14664
	Total	64651

Teacher Education Programme

The university offers a variety of in-service teacher training programmes through the Faculty of Pedagogy, Continuing Education and Literacy. Teacher education is a very important component of the academic programmes of the university. In fact the university was started primarily for teacher education. The following are the major programmes of the university in the area of teacher education:

1) Primary Teachers' Orientation Course (PTOC)
2) Primary Teachers' Certificate (PTC)
3) Certificate of Teaching (CT)
4) Arabic Teachers' Orientation Course (ATOC)

5) Post-Graduate Diploma in English Teaching (Siddiqui, 1986:10-12).

Besides the above five programmes, the university provides intensive training to key educational planners and managers in the Ministry/Departments of Education.

Women's Education

The university emphasises women's education. Several specialised programmes are developed for the benefit of women, both literate and illiterate. The major aim of women's education is to relate education to the changing needs of women, thus making education meaningful and purposeful to women. Some of the programmes and projects aimed at the development of women are:

1) Basic Functional Education
2) Secondary School Certificate for Women
3) Higher Secondary School Certificate Programme
4) Graduate Programme
5) Professional Training Programme such as Dietetics Diploma, Health and Nursing Courses.

To look after the specialised activities relating to women's education, the Department of Women's Education was set up in 1981, primarily on the directive of the President of the country (AIOU, 1986 a: 72).

Vocational Education

The university offers courses in vocational education through its Department of Technical and Vocational Education. Some of such courses are:

1) Electrical wiring
2) Electrician's Course
3) Electricity in villages.

The first two are half-credit courses at the Intermediate level. They are supported by radio, TV programmes and compulsory tutorials. These courses are very popular and have large enrolments. Two more half-credit intermediate level courses were added in 1985. These are basic electronics and maintenance and repair of household electronic appliances. With a view to strengthening vocational education and helping people in the self-employed sector, the following Inter level courses have been planned by the university: auto-servicing, auto-mechanics, radio servicing (AIOU, 1986 a:70).

Agricultural Education

The university has developed special programmes for the development of farmers in rural areas. They help in the diffusion of agricultural technology. The broad objectives of these programmes are:

1) to offer functional courses in agriculture and animal husbandry based on national priorities and the basic needs of the rural people;
2) to offer information regarding newer and improved farming operations and basic skills to the literate farmer through printed materials, radio and television;
3) to educate field extension staff and give in-service training and bring their knowledge up-to-date with current international practices;
4) to diffuse methods of technology to the farming community; and
5) to enrich the lives of the rural farming community through enhanced agricultural extension facilities.

A large number of farmers and functionaries in agricultural development benefit by these programmes. The following categories of people are particularly benefited:

1) Field assistants
2) Stock assistants
3) Secretaries of Union Councils
4) Tractor operators and tractor owners
5) Officials of departments such as Soil Conservation, Land Reclamation, Water and Power Development Authority, Revenue, Education, Social Welfare and the Army
6) Fertiliser and other firms dealing in plant protection devices, agricultural engineering firms, manufacturers of farm machinery and tractors, All Pakistan Women's Association and adult education societies
7) Progressive farmers with interest in crops, fruits, poultry and livestock.

The AIOU is probably the only open university which runs a variety of non-conventional short-term functional courses for the benefit of farmers and other sections of the rural population. The following list illustrates the range of courses run by the university through its Department of Agricultural Sciences:

1) Summer vegetable growing
2) Winter vegetable growing

3) Soil problems and their remedies
4) Plant protection
5) Tractor maintenance and repair
6) Poultry farming
7) Improved methods of fruit production

Some of the similar courses planned by the university are.

1) Improved methods of production of oil-seed crops
2) Improved methods of productivity of important pulse crops
3) Growing trees
4) Sheep and goat husbandry
5) Farm machinery and small implements.

These programmes of the university supplement, support and reinforce the extension services of the Departments of Agriculture and Animal Husbandry of the provincial and federal government. It may be interesting to note here that the open university in Thailand too runs similar programmes in the areas of agriculture and cooperatives in cooperation and collaboration with the concerned government agencies.

Projects

The university has undertaken a large number of projects which are different from its regular academic programmes. The projects are sponsored by a variety of agencies and are meant for specific groups of people. Some of the projects operated by the university are discussed hereunder.

Integrated Functional Education Project

The project aims at imparting literacy to the rural women. Besides literacy, it imparts skills required for producing certain handicrafts which are sold in local markets. The project, thus, provides literacy as well as useful skills to the rural female population. Follow-up action is also taken to help neoliterates to move further in education.

Civic Education Project

This project which is sponsored by the Federal Ministry of Local Government and Rural Development aims at providing extended facilities of education and training with special reference to civic education for local councillors and the public. The instructional system consists of print material and broadcasts. The rights and duties of local representatives, the role of local Government in national development, the importance of community participation, etc., are the contents of the broadcast and non-broadcast material.

Special Education Project

The project aims at teaching the visually handicapped children. An adequate number of teachers are trained under this project for the purpose.

RICE Project

The RICE (Regional Institute of Complementary Education) is a recent project jointly sponsored by the Government of Pakistan, the Governments of member countries of the Organisation of Islamic Countries, the Islamic Solidarity Fund and the World Federation of Arabic Islamic International School. The project aims at designing and organising educational training and research programmes for the Muslim population in the South Asian region.

Basic Functional Education Programme (BFEP)

The Basic Functional Education Programme originated from the Functional Education Project for rural areas which was sponsored by the Overseas Development Administration in 1982 but came to an end by June 1985. It was originally aimed at developing a methodology and strategy for providing basic education to the rural masses to improve their living standard. The objective of the project was to help the university to acquire the expertise and experience necessary for initiating a big programme of basic functional education. The detailed tasks under the project were:

a) to find out what types of courses would interest and benefit rural learners,
b) to develop and test an appropriate distance teaching methodology,
c) to assist the university staff to evolve procedures for the production of suitable audio-visual course material, and
d) to develop and put into effect ways of testing course ideas, outlines and materials in a rural setting and to feed results back to the course producers.

Institute of Educational Technology

The Institute of Educational Technology (IET) of the AIOU was set up in 1974 with the following functions:

a) to develop and produce radio and television programmes for various courses of the university,
b) to develop audio-cassettes and illustrated audio-visual books for university students as an aid in learning,
c) to assist the university regional offices and Study Centres in proper utilisation and maintenance of their audio-visual equipment,
d) to guide and advise other governmental and non-governmental agencies in the development of their broadcast and non-broadcast educational material,
e) to enter into contracts with these agencies for the development and production of such material, and
f) to initiate and conduct research in the area of Educational Technology.

The Institute of Educational Technology consists of three departments: 1) Production Department, 2) Engineering Department, and 3) Department of A.V. Design and Photography.

The producers in the IET work in close collaboration with the course team members in each department in planning, designing and producing a course, especially when it comes to decisions concerning presentation of part of the course through non-print media. Course proposals are always scrutinised by the Research and Educational Technology Committee, a statutory body which advises the university on the production of films and broadcast scripts. Its members include educational media advisers specialising in correspondence, video, television and films. Development and writing of broadcast scripts and correspondence texts is simultaneously carried out. While the teachers in the departments convert plainly written manuscripts into correspondence text, the producers at the IET change their scripts into actual production scripts. The responsibility of the IET does not end with the development and production of a certain course. It continues to be involved actively in the analysis of the feedback and the review and revision of instructional material in accordance with it.

Although every year new courses are added to the list, old programmes are frequently revised, improved and re-produced. The IET can produce 60 to 70 TV programmes and about 150 to 200 radio programmes a year. The production costs are approximately calculated at Rs. 25,000 for a TV programme of 50 minutes duration and Rs. 2,000 to 3,000 for a radio programme of 15 minutes duration.

Regional Services

Regional offices and study centres are the agencies through which support services are provided to students. Students rarely visit the headquarters of the university at Islamabad but are regularly in touch with regional and study centres.

The university has a well-established network of regional and study centres. There are at present 13 regional offices, 4 regional sub-offices and about 320 study centres. Separate study centres exist in some places for women students. Student support services at study centres are directed from the regional offices.

The regional offices function under the overall supervision and direction of the Director of Regional Services at the University headquarters. Each regional office is headed by a Regional Director, assisted by an Assistant Regional Director. The Director of Regional Services implements the tutorial policies, planned and formulated by the university on the recommendations of the course teams. For each semester, tutorial guidelines are drawn, keeping in view the distribution of students. The regional offices have freedom to effect changes within these broad guidelines. The Regional Directors, through periodical meetings at Islamabad discuss and debate the issues that arise from time to time and decide upon the course of action. The Regional Directors in many ways serve as the eyes and ears of the university, scanning the field and feeding back information, suggestions and criticism to the parent body. The resources and personnel at their disposal were somewhat limited in the beginning, but they have been increased gradually. This has enabled the Regional Directors to offer a much better service to students and to develop their own role as 'representatives and envoys' of the university. Regional Directors appoint tutors and supervise the tutorials in their regions. They keep programme reports of students and provide continuous feedback to university course teams and the university authorities at the headquarters.

Tutors organise face-to-face tutorial sessions at study centres. The face-to-face sessions provide students an opportunity to clarify their doubts and seek guidance in their studies. Normally, each tutor is assigned a group of 25-30 students. Tutors who are mostly part-timers, are carefully selected and trained for the job. They are briefed and trained at one-day meetings throughout the country at the commencement of each semester, and are provided with tutor guides for each course. To effectively supervise the tutors and to assist the Regional Directors in briefing the tutors, experienced and motivated part-time staff are appointed as senior tutors.

A study centre provides opportunities for interaction between the learner and the tutors. Students meet the tutor as well as fellow students at the study centre. Attendance at the study centres is not compulsory tor the students. Tutorials are meant as supplementary inputs largely of a remedial nature, for those who have difficulty with the printed course material.

The study centres are located in existing full-time formal educational institutions and are kept open in the evenings during the specified periods. Each centre is supervised by a coordinator who is either the head of the host institution or a senior member of its faculty. The nature and organisation of study centres for certain courses differ from the general pattern. For instance, study centres for the primary teachers' course are organised separately from those in general and functional programmes, as students for these courses are nominated from specific locations.

Each regional office and sub-office has an advisory committee consisting of representatives of provincial authorities, local bodies and agencies in the fields of education, health, agriculture, etc. Its purpose is to comment on courses, admission arrangements, teaching system and broadcasts. It meets once in three months and its comments and suggestions are forwarded to the university headquarters at Islamabad.

A recent development in student services is the establishment of model study centres to provide better service to students, particularly in remote areas. A beginning was made in 1984 by opening four such centres.

A model study centre will have the following facilities and services.

1) Cassettes of radio and TV programmes for use by the students and tutors, plus other supplementary tapes.
2) A small library and relevant printed material, including off-prints, reference works, magazines, etc.
3) Study rooms for conducting tutorials.
4) Facilities of information, besides materials and advice sessions during the enrolment period for various courses (Allana, 1985 : 35).

The overall plan of the university is to establish a four-level institutional set-up to provide support services to students.

Level-1 : 13 regional offices with administrative offices, tutorial and counselling facilities and libraries. Regional offices would emerge as centralised centres for student admissions, counselling and study resources as well as for briefing and training of tutors.

Level-2 : 67 model study centres with increased facilities which would include counselling services to students during enrolment periods and enquiry services at other times. Some of these would be upgraded to Level-1.

Level-3 : 80 satellite centres for a smaller range of courses. They would be linked to the main model study centres or regional offices through senior tutors progressively.

Level-4 : 90 to 100 remote centres which may not be active for every semester and which may nave limited equipment and facilities (AIOU, 1986a : 152).

In-Service Training

The university has institutional facilities to provide orientation and training to its academic, administrative and technical staff. The recently set up Department of Distance and Non-Formal Education is supposed to perform the following functions:

1. to conduct need assessment surveys;
2. to guide the writers and to conduct writing techniques workshops;
3. to assist in the selection of instructional support materials;
4. to provide training in script-writing techniques;
5. to assist in pilot testing of course materials;
6. to provide in-service training/orientation courses;
7. to provide feedback to writers/departments on course content and materials during preparation and make them effective for student learning;
8. to evaluate media support to courses;
9. to conduct experiments for more effective approaches to course writing;
10. to document and disseminate material on Distance and Non-Formal Education;
11. to exchange material and experiences with institutions of Distance and Non-Formal Education;
12. to provide instructional programmes in Distance and Non-Formal Education for specialisation in this sphere of education;
13. to collaborate with other institutions for improvements in distance education techniques.

(AIOU, 1985 : viii–ix).

The department has already organised workshops for some of its staff members on 1) writing distance education units, 2) assessment and examinations, 3) script writing for TV and radio, and 4) non-broadcast media. The Department also has a plan to run graduate and post-graduate level courses in distance and non-formal education.

Research and Statistical Centre

The university has an independent Research and Statistical Centre to (a) conduct statistical surveys, (b) promote institutional research, (c) evaluate course texts, supplementary material and broadcast material. and (d) collect and disseminate research information on distance education and open university systems. The centre has so far worked of the following projects:

1) Research on the usefulness of TV and radio broadcasts in the distance teaching system.
2) A case study of the Pakistan Studies Course (B.A. level).
3) Role of feedback in distance education.
4) Study of drop-outs.
5) Effect of the admission-form fee on enrolment.
6) Research on the number of students and their pass percentage.
7) Publication of *Pakistan Journal of Distance Education*.
8) Supply of statistical data to the university as well as to various departments of the Government of Pakistan (AIOU, 1986 : 5–6).

A periodic evaluation and review of all the components of any system is necessary to identify the drawbacks of the system and, thereby, remove them for achieving the organisational goals. Evaluation can be either internal or external. Generally, the processes of evaluation and review of the programmes and their performance are built into the organisation. At times, it may be desirable for an organisation to get its functioning evaluated, studied and analysed by an external expert agency.

The AIOU has already conducted internal evaluation of some of its activities. Dropout and pass rates, effectiveness of radio and television programmes are some of the areas in which internal evaluation was done. A study of dropouts indicated that the mean rate of dropouts from the assessed course is 42.5 per cent. Efforts were made to identify the reasons for the high dropout rate. On the basis of the study of the dropout rate, the university has initiated a long-term study of the phenomenon of dropouts with the assistance from the International Centre for Research and Development. Utilising the results of the analysis, the university has improved the student support service by providing (a) better and quick information service, (b) increasing facilities at regional and study centres, (c) briefing and training activities for tutors, and (d) better monitoring of tutorial and counselling activities.

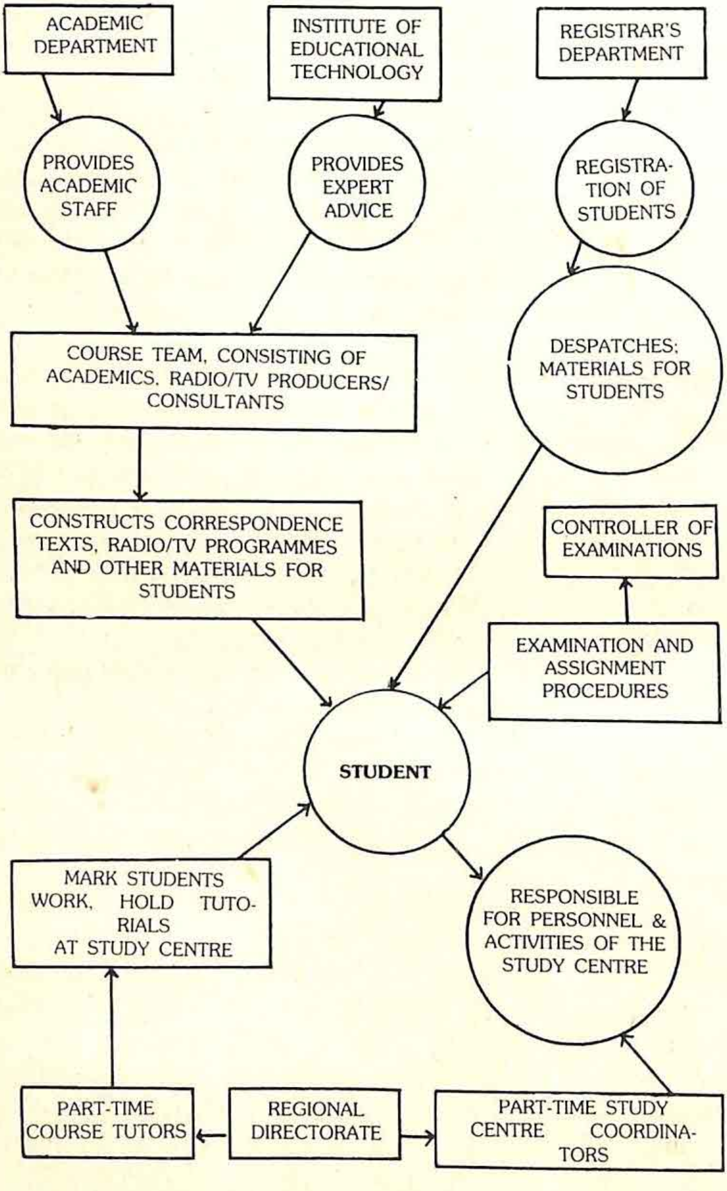
In 1984, a study was conducted to assess the effectiveness of radio and television programmes presented by the AIOU in support of various courses. The study led the Research and Statistical Centre, which conducted the study, to the following conclusions:

1) Since 80 per cent respondents indicated that they owned their own radio sets, it would be more beneficial if the university concentrates on the planning, preparation and presentation of radio programmes.
2) Compared to radio, the respondents have demanded detailed and long duration programmes on television. Only 45 per cent could avail of television facility because it is costly and not within the reach of a great majority of students. Such programmes are highly expensive, and researchers have also proved that TV as a medium to disseminate learning should not be relied upon. More and more efforts should be made to prepare cheap cassettes which should be placed in study centres for common use of the students.
3) Such courses which have heavy practicals in their contents should be supported by television programmes.
4) An overview of all radio and television programmes should be made before tele-broadcast to check the quality of content and presentation. This exercise should be done by a panel of course coordinators, producers and a selected number of students.
5) To ensure maximum participation of students, study centres should be made easily accessible.
6) In order to help students in assessing their performance, feedback should be given by tutors long before the next assignment is submitted.
7) Arrangement to provide results to each student should be made long before he moves to a new semester. This would facilitate students to decide their future courses (AIOU, 1984 : 120).

Figure 12.5 depicts how the system works.

Figure 12.5

HOW THE SYSTEM WORKS.


ACADEMIC DEPARTMENT
INSTITUTE OF EDUCATIONAL TECHNOLOGY
REGISTRAR'S DEPARTMENT
PROVIDES ACADEMIC STAFF
PROVIDES EXPERT ADVICE
REGISTRATION OF STUDENTS
COURSE TEAM, CONSISTING OF ACADEMICS, RADIO/TV PRODUCERS/ CONSULTANTS
DESPATCHES; MATERIALS FOR STUDENTS
CONSTRUCTS CORRESPONDENCE TEXTS, RADIO/TV PROGRAMMES AND OTHER MATERIALS FOR STUDENTS
CONTROLLER OF EXAMINATIONS
EXAMINATION AND ASSIGNMENT PROCEDURES
STUDENT
MARK STUDENTS WORK, HOLD TUTORIALS AT STUDY CENTRE
RESPONSIBLE FOR PERSONNEL & ACTIVITIES OF THE STUDY CENTRE
PART-TIME COURSE TUTORS
REGIONAL DIRECTORATE
PART-TIME STUDY CENTRE COORDINATORS

Source: Allama Iqbal Open University: An overview, 1986, P.7.

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13

THE SPANISH UNED: ONE WAY TO A NEW FUTURE

JOSÉ LUIS GARCÍA GARRIDO

No change goes without opposition. No deep change goes without heavy opposition. The rise of the open universities has surely been one of the most important events–perhaps the most important–since the birth of the ancient universities in the Middle Ages. It has carried out a change in the concept of "university". Therefore, nobody should be amazed at the waves of opposition–sometimes rough, some times smooth but persistent–that this new university model has evoked all over the world. But the validity of this new model is becoming clearer and clearer everyday. New open universities are being founded everywhere, and sometimes in countries of a millennial culture, in countries which have, during many centuries, been a guide for universal thought and spiritual life. This is obviously the case in India and its new open university, which has even taken the name of one of the most prestigious personalities of our century: that of Indira Gandhi. This name will not only honour India's open university, but all the open universities in the world.

Circumstances Leading to the Establishment of UNED

The beginning of the seventies in Spain has been characterised by new conditions for the development in education, due to the approval of the General Law on Education, on 4 August, 1970. This law was particularly attentive to the new circumstances imposed by modern society in which the enhancement of the educational opportunities to those who could not benefit by such possibilities earlier, had become a primary desideratum. As a consequence of this law, the pattern of Spanish education has been established as the following:

- Pre-school education, from ages 4 to 6, where available, was optional.
- Primary and lower secondary education (called EGB, General

> Basic Education), lasted for eight years, from ages 6 to 14. Those students who graduated, progressed to higher secondary education (Bachillerato) from ages 14 to 17, while those failing to graduate entered the first stage of vocational training. Opportunities have been established for transfer from academic to vocational training, and vice versa. Following the Bachillerato, students might take a university training. Students completing the first stage of vocational training had the opportunity to progress to the intermediate orientation course.

At the same time, the Law took into consideration the case of those people who, for different reasons, had not reached the final level of the EGB and/or had not attended a regular secondary school. Article 47,1 of the Law established new ways in which to offer a second opportunity to these people who have received only limited education during their childhood.

In order to offer the possibility of continuing their studies to those who could not regularly attend the official centres or follow the common timetables, the Ministry of Education and Science, in collaboration with the institutions involved, would regulate different types of correspondence education by radio and TV.

Two institutions, for primary and secondary distance education, have been created by the Law. They are the CENEBAD (National Centre for Basic Education at a Distance) and the INBAD (National Institute for Secondary Education at a Distance). At the university level, the educational Administration at that time began to study the project of creating a non-traditional university, especially dedicated to the distance education methodology. Various members of the formal planning committee, established on 6 May, 1971, made study visits to well known foreign institutions, such as the British Open University, the American Consortia for Distance Education and the Japanese University of the Air (in project phase). As a consequence of that and other preliminary steps, the new University at a Distance was legally founded by an Act on 18 August, 1972, in which it was said: "The necessity of developing one of the basic aims of the educative reform, that is to say, equal opportunity for all, requires the implementation of those means that facilitate the access to higher education to those who, for reasons such as home residence, labour activities, etc., cannot attend programmes offered by the conventional universities." On 15 September, 1972, the first Rector of UNED (Manuel J. García Garrido) was appointed and, after a short visit to the open university in October 1972, he began the recruitment of the staff and the implementation of policies. The first group of 12,442 students (law, philosophy and arts and the admission course for mature students without formal secondary qualifications) was enrolled on 6 February, 1973. Since then, the UNED has reached a population of almost 90,000 students in its different programmes, occupying second place in the quantitative ranking of the Spanish universities.

When the UNED was created, some institutions of open higher education were already functioning in the world, such as the University of South Africa and the Open University of the United Kingdom. During these years other events took place: in 1972, when the Act of Foundation of the UNED was passed, the Schramm Commission published the report—"An Everyman's University for Israel"; and in 1973, when the first UNED courses began, Iran established its Free University and the Israeli Knesset approved the foundation of the Everyman's University.

Objectives

The UNED was created on the basis of two different main approaches to distance education: on the one hand, individual study and individual non-contiguous tuition relying on open course materials produced for large groups of students (the "industrial model" in Otto Petter's words) and, on the other, the parallelism with resident study, usually, including class or group teaching face-to-face as a regular element (the "bi-model Australian" pattern). Therefore, the UNED has combined, since the beginning, the large-scale type of distance teaching university, with its central headquarters, where the production, distribution of materials and students evaluation are concentrated, with the decentralised network of study centres, which introduces the human interactive element into a highly depersonalised methodology.

In its constitutional chart, the UNED was given a number of formal objectives:

- to provide higher education at home, equivalent to that provided by the conventional universities, to all those who missed their first educational opportunity or were unable to attend existing institutions of learning without disrupting their normal occupations or because of distance, sickness, rigid working timetables, etc.
- to substitute the "free learning" offered in the traditional

universities to those who, for some reason or other, could not attend class and, hence, had to study independently, as best as they could. The dropout rate of these external students was very high and conventional universities could do very little in order to help them.

- to become an effective instrument to the implementation of equal opportunities in higher education in Spain.
- to increase the enrolment capacity of Spanish universities.
- to develop a more individualised and student-centred system of teaching and learning.
- to contribute to methodological innovation in the Spanish higher education system.

Other "informal" objectives were also pursued:

- a cheaper teaching method than conventional education, measured in terms of audience reached and learning.
- a better use of local resources to support distance learning, especially in zones deprived of educational opportunities.
- a flexible way of teaching and learning, which could enable many professionals to update their knowledge at a high speed and a low cost.

These objectives were not completely new and they had already been fixed or would be fixed in future years by a good number of foreign distance teaching universities. For instance, the interest in enhancing the university enrolment capacity in their countries is common for UNED, the FU and the Open University of the Netherlands. Preoccupied with giving a "second chance" to people who have missed a complete educational career at the due age are the UNED, Athabasca University, the Universidad Nacional Abierta (UNA) of Venezuela, the Universidad Estatal a Distancia (UNED) of Costa Rica, Everyman's University, the OU of the United Kingdom and Open University of the Netherlands. Another common objective for the UNED, UNA, Allama Iqbal Open University and Everyman's University is that of helping people who cannot attend the conventional universities because of physical distance, medical problems, etc. The UNED was to contribute in the field of the educational innovations, just like the UNA, Athabasca University, China's CRTVU, FU and UKOU.

Organisational Structure of the University

Though the UNED is similar to the other distance teaching universities regarding its objectives, its organisational structure is affected, as in the case of all Spanish universities, by the Law on University Reform, approved by the Parliament in 1984. In the new Spain of Autonomous Regions, which emerges from the Constitution of 1978, the UNED is the unique *national* university, depending directly on the Central Ministry of Education and Science, while the other Spanish universities depend functionally on the educative organs of their autonomous regions. Within the university, the most important organ is the Senate, composed of representatives of the academic and administrative staff, students and study centres.

The Senate has promoted the statutes of the university, which regulate the academic and administrative life. Shortly, a Social Council of the university will be elected, composed of representatives of the political and business sectors as well as others, in order to approve the budget and programme of the university in future years. Apart from the special features due to its nature, the UNED organisation is very similar to that of the traditional universities in Spain.

The important decision makers in the university are:
- The Rector
- The Pro-Rector of Academic Affairs and Academic Staff
- The Pro-Rector of Research
- The Pro-Rector of Study Centres
- The Pro-Rector of Continuing Education
- The Pro-Rector of Finance
- The Deans of the Faculties: Law, Geography and History, Philology, Philosophy and Educational Sciences, Psychology, Economics and Business Administration, Sciences and Industrial Engineering
- The Dean of the Admission Course for those who are more than 25 years old and without the secondary school certificate.
- The Director of the special programme on Hospital Nursing
- The Director of the Institute of Educational Sciences
- The General Secretary.

The core of academic life is the Department, which is assigned a variety of functions: arrangements of the teaching staff; production and revision of course materials; production of assessment texts; correction of examinations; contacts with tutors and direct support to the students by means of letters, telephone contact and face-to-face interviews.

Apart of these central organs located in the headquarters of the university in Madrid, the UNED has an important network of study centres, their number having increased from 11 in 1974 to 52 at present. They have been established through the initiative of local corporations, public or private agencies, which provide the buildings, equipment, materials and pay for the personnel employed, including teacher-tutors. The study centres offer information and counselling for people who have not yet enrolled as students, and once a student is enrolled, he or she uses the buildings and facilities provided by the centre in order to meet the tutor and other students in formal or informal work groups. Usually located in small cities where there is no other university, the UNED Study Centre is expected to also be a cultural focus there.

Staffing Pattern

The teaching staff of the UNED comprises 759 members, among the different academic grades: *catedráticos* (Full Professors), *profesores titulares* (Associate Professors), *profesor colaborador* (Lecturers, until 1987) and *ayudantes* (Assistants). They generally come from the traditional universities (only a small group of Assistants being formed by the UNED itself) and their training in distance education is assured by an in-training service provided by the Institute of Educational Sciences.

About 2,400 tutors work in the study centres. These are usually secondary teachers, engineers, etc., who work on a part-time basis. They depend, academically, on the departments and, administratively, on the study centre itself.

The administrative staff of the UNED is composed of almost 400 persons, among the different categories of administrative employees: secretaries, book-keepers, blue-collar workers, etc. They all have their representatives in the Senate and in the Governing Body of the university, called the *Junta de Gobierno.*

Course Structure

The UNED offers a number of study programmes, structured as follows:

a) *An Admission Course* for people over 25, who have not completed the secondary school and have not acquired the certificate of *Bachillerato* without which students are not accepted by conventional universities in Spain.

b) A number of degree courses (*carreras*) lead to the degree of *Licenciado*. All the courses are offered under the responsibility and control of the different academic departments which constitute the faculties of the UNED. They are usually programmed to five academic years.

c) Vocational programmes, as, for example,a diploma of *Asistente Tecnico Sanitario* for hospital nursing, a special course for teachers in business administration, etc.

d) *Matricula Abierta* (free enrolment courses), which comprise single courses for those who want to pursue university education without completing the whole cycle leading to obtaining the *Licenciado* degree. This new type of student can choose any course or course combination of the total course programmes he/she wants. Some courses are especially designed for this purpose and more special programmes for certain job-related studies are being studied.

The academic year consists of two semesters, the first starting in October and the second in February. The students buy the whole study material at the beginning of the fall semester in the study centres or in selected bookshops.

Instructional Methods

The most important method employed by the UNED is its printed material, and within it, the so-called *Unidades Didácticas* (didactic units). Their number is almost the same for all the courses: Six *Unidades Didácticas*, of six topics each. Some of them are self-contained, others are complemented with other textbooks. There is also great uniformity in the outline: specification of aims; graded and detailed information; guidance on how to study and a number of questions for self-evaluation.

At the beginning, the *Unidades Didácticas* were normally written by Professors from the traditional universities, working under the supervision of the UNED staff. This was due to the fact that the academic staff of the UNED itself was small. Today, many of these *Unidades Didácticas* are being reconsidered and even replaced especially in cases where the Professors from traditional universities had written a textbook rather than self-instructional material. The materials are typed within the secretariats of the UNED and then printed by the university itself or externally.

The *Unidades Didácticas* and all the printed materials of the university are developed under the full responsibility of individual university teachers. Nevertheless, drafts must be approved by the department's council and a special University Committee on printed material. The UNED is anxious about its academic reputation and, therefore, is paying great attention to the quality of its printed materials. As a result, there are already many professors and students of conventional universities using the UNED's teaching material in the process of their teaching and/or learning.

The second element, in addition to the written text, comprises the audio section. There is limited radio transmission on Radio 3, from 8 to 10.30 each evening except on Saturdays. Three hours are given to the admission course, the rest being divided amongst the different departments. Aware of the rigidity and paucity of open air transmission, the technical Division (Dicección téchnica–a special UNED institution which produces radio programmes for broadcasting through Radio-Nacional de España) is also producing a great number of cassettes for use by students in their own homes or in study centres. Television is not used, because it is considered prohibitively expensive, but some 30 video cassettes have already been produced and many others are in the planning stage.

Students and their Background

As I have already mentioned, the UNED is the second largest university in Spain. The number of students increased steadily from 11, 400 in 1973 to 87,300 in 1984 (Table 13.1).

The student profile differs from that which prevails in most conventional universities in Spain and is much more similar to that of the other distance teaching universities. Research done by the research division of the Institute of Educational Sciences (published for several years, under the title of *La UNED y sus alumnos)* gives us the typical UNED student's profile: male, 30 years of age, married, perhaps with two children, middle-stage employee in public administration or the private sector, whose aim is to achieve a degree in order to increase his chances of furthering a successful career.

But the impact of the latest changes in the society as a whole has had its consequences on the composition of the UNED student body. Today, there are several other emerging categories who ask for university education at a distance, categories often neglected by the conventional universities: women, young people looking for their first job, housekeepers, the unemployed. In the figures included in Table 13.2 one can see the results of the research on the main

Table 13.1

EVOLUTION OF THE STUDENT BODY ENROLMENTS IN THE FACULTIES AND SPECIAL COURSE

Academic Year Studies	1973	1976/77	1980/81	1981/82	1982/83	1983/84	1984/85
Law	1,894	5,932	10,121	11,362	12,998	14,452	17,015
Philosophy and Letters	4,506	9,829	11,696	12,200	13,708	15,999	18,542
Economics and Business		4,824	5,790	5,402	5,582	6,117	6,814
Sciences		2,851	2,528	2,314	2,356	2,302	3,096
Engineering		1,163	923	869	940	1,131	1,591
TOTAL FACULTIES	**6,400**	**24,599**	**31,058**	**32,147**	**35,584**	**40,001**	**47,058**
Admission Course over 25 Years	5,000	8,994	10,761	10,734	11,587	14,044	16,043
Course-Level for Hospital Nursing			15,308	17,146	20,112	24,620	24,152
In-Service Training for Primary Teachers		7,750	6,130	6,442	5,772	1,990	
TOTAL SPECIAL COURSES	**5,000**	**16,744**	**32,199**	**34,322**	**37,471**	**40,654**	**40,195**
TOTAL UNIVERSITY	**11,400**	**41,343**	**63,259**	**66,469**	**73,055**	**80,655**	**87,253**

Table 13.2

MAIN CHARACTERISTICS OF UNED STUDENTS ENROLLED IN UNIVERSITY AND ADMISSION COURSES

	NEW ENROLMENTS		STUDENTS		TOTAL STUDENT BODY	
	ABS.	%	ABS.	%	ABS.	%
SEX						
Male	(14,113)	62	(14,858)	67	(28,971)	65
Female	(8,630)	38	(6,836)	31	(15,466)	34
N/R	(116)	*	(391)	2	(507)	1
TOTAL	**(22,859)**	**100**	**(22,085)**	**100**	**(44,944)**	**100**
AGE						
Less than 20 years	(1,273)	6	(416)	2	(1,689)	4
20-24 years	(5,441)	24	(3,199)	14	(8,640)	56|19
25-29 years	(8,591)	37	(6,105)	28	(14,696)	33
30-34 years	(4,063)	18	(5,369)	24	(9,432)	21
35-39 years	(1,955)	8	(3,554)	16	(5,509)	12
40-49 years	(1,150)	5	(2,440)	11	(3,590)	8
50-59 years	(199)	1	(672)	3	(871)	2
Over 60 years	(26)	*	(87)	*	(113)	*
N/R	(161)	1	(243)	1	(404)	1
TOTAL	**(22,859)**	**100**	**(22,085)**	**100**	**(44,944)**	**100**
CIVIL STATUS						
Single	(11,299)	49	(8,069)	38	(19,368)	43
Married	(10,882)	48	(13,352)	60	(24,234)	54
Others	(574)	3	(542)	2	(1,116)	2
N/R	(104)	*	(122)	*	(226)	1
TOTAL	**(22,859)**	**100**	**(22,085)**	**100**	**(44,944)**	**100**

Table 13.2 (Cont.)

INHABITANTS						
Less than 2,000 inhabitants	(963)	5	(879)	4	(1,842)	4
2,000-10,000 "	(1,983)	9	(1,717)	8	(3,700)	8
10,001-20,000 "	(1,461)	6	(1,192)	5	(2,653)	6
20,001-50,000 "	(2,339)	10	(2,165)	10	(4,504)	10
50,001-100,000 "	(2,338)	10	(2,509)	11	(4,847)	10
100,001-250,000 "	(4,301)	19	(4,320)	19	(8,621)	19
250,001-500,000 "	(2,031)	9	(1,896)	9	(3,927)	9
500,001-1,000,000 "	(1,483)	6	(1,468)	7	(2,951)	7
Over 1,000,000 "	(4,715)	21	(5,475)	25	(10,190)	23
N/R	(1,245)	5	(464)	2	(1,709)	4
TOTAL	**(22,859)**	**100**	**(22,089)**	**100**	**(44,944)**	**100**
OCCUPATION						
Public employee	(3,773)	16	(3,987)	18	(7,760)	17
Teachers	(3,308)	14	(3,775)	17	(7,083)	16
Admin. and Techni. From the private sector	(2,676)	12	(2,523)	11	(5,199)	12
Office employees	(1,047)	5	(3,793)	17	(4,840)	10
Management	(777)	3	(455)	2	(1,232)	3
Military Service	(1,326)	6	(1,094)	5	(2,420)	5
Auxiliary Personnel	(2,533)	11	(1,508)	7	(4,041)	9
Blue-collar workers	(1,756)	8	(609)	3	(2,365)	5
Unemployed	(4,118)	18	(3,818)	17	(7,936)	18
N/R	(1,545)	7	(523)	3	(2,068)	5
TOTAL	**(22,859)**	**100**	**(22,085)**	**100**	**(44,944)**	**100**

Table 13.2 (Cont.)

EDUCATIONAL EXPERIENCE						
Without Secondary School Diploma	(6,180)	27	(1,770)	8	(7,950)	18
Secondary Diploma	(6,917)	30	(9,384)	42	(16,301)	36
Teaching Certificate	(3,357)	15	(3,317)	15	(6,674)	15
Job-degree Certificate	(1,779)	8	(3,710)	17	(5,489)	12
University Degree	(2,095)	9	(1,775)	8	(3,870)	9
Transfer student	(2,038)	9	(1,467)	7	(3,505)	8
N/R	(493)	2	(662)	3	(1,155)	2
TOTAL	**(22,859)**	**100**	**(22,085)**	**100**	**(44,944)**	**100**

	NEW ENROLMENTS ABS.	%	STUDENTS ABS.	%	TOTAL STUDENT BODY ABS.	%
AREAS OF STUDIES						
Admission Course	(8,453)	37	(1,770)	8	(10,223)	23
Law	(4,567)	20	(8,164)	37	(12,731)	28
History/Geography	(1,577)	7	(2,233)	10	(3,810)	8
Philology	(666)	3	(808)	4	(1,474)	3
Philosophy/Educational Science	(1,491)	6	(2,112)	10	(3,603)	8
Psychology	(2,497)	11	(1,851)	8	(4,348)	10
Economics	(998)	4	(1,485)	7	(2,483)	6
Business	(1,038)	5	(1,442)	7	(2,480)	6
Physics	(362)	2	(414)	2	(776)	2
Mathematics	(415)	2	(520)	2	(935)	2
Chemistry	(259)	1	(301)	1	(560)	1
Engineering	(456)	2	(493)	2	(949)	2
Training for Business Adminis.	(1)	*	(437)	2	(438)	1
N/R	(79)	*	(55)	*	(134)	1
TOTAL	**(22,859)**	**100**	**(22,085)**	**100**	**(44,944)**	**100**

characteristics of the UNED's students enrolled in university and admission course, from the points of view of sex, age, civil status, educational experience, areas of studies, habitat and occupation.

Evaluation System

Evaluation is an integral part of the course planning and production. In the UNED, the evaluation process includes two types of examinations: at a distance and twice-yearly formal exams at the Study Centres.

As for the first type, UNED's students write their assignments in specially produced booklets called *"evaluaciones a distancia"* (evaluation at a distance), four times a year, after the didactic units numbered 1, 2, 4 and 5. These booklets contain a number of objective-type tests and several questions requiring short written answers. They are tutor-marked, have to be completed before sitting at the formal examinations, and represent about 20 per cent from the final assignment mark.

The twice-yearly formal examinations (February and June, with the further opportunity to sit at the examination in September in case of failure) take place in the UNED study centres. Special arrangements are made for students abroad (in Spanish Embassies in different countries) or in prison. The test and examination papers are sent by mail in special containers for security reasons. All the papers are marked in Madrid by the teaching staff of the academic departments. At least 80 per cent of the overall grade must relate to the student's performance in the examination.

There is a large proportion of students leaving the UNED without a degree or without sitting for an examination. The institution is, in great measure, responsible for the dropout rate. There is a lot to be done in order to ameliorate the academic and administrative structure of the university, which, perhaps, reproduces too strictly the pattern of conventional universities and gives too little freedom to the students. A distance student, who is, at the same time, a bread-winner, a home-maker, a parent and a professional, needs to adapt the academic framework to his/her necessities and possibilities and not be "adapted" by it. On the other hand, he needs to be followed attentively by the university, not in order to be controlled, but to be encouraged by a permanent and positive relationship with the tutors and the teaching staff of the faculties.

What can be said without reservation is that those who obtain degrees at the UNED have no problem in having their credentials recognised. They have proved to possess important qualities such as self-discipline, persistence, determination, self-esteem, all of which are highly appreciated by their employers.

Finances

The UNED's budget for 1985 was 2,564 million pesetas, that is 15.54 million US$, from which the direct contribution of the Ministry of Education and Science was 46.9 per cent (1,206 million pesetas = 7.30 million US$). The remainder was financed by student fees-(1,222 million pesetas = 7.40 million US$; that is, 47.6 per cent) and sales of books and materials (180 million pesetas = 1.09 million US$; that is, 7 per cent). But the cost of the *Centros Asociados* (over 800 million pesetas = 4.8 million US$), financed by other agencies, must be added to the cost of the central services. Therefore, the average cost per student is about 40,000 pesetas or 240 US$.

Problems and Prospects

It has already been said that the UNED is, at present, the unique *national* university in the country, though the Government still retains many prerogatives in relation to most of the universities, except in some aspects, those of Catalunya, Basque Country, Galizia and Andalucia. Nevertheless, the recent law on university reform has also reinforced the autonomy of the universities, conferring on them greater powers for self-government and decision making. For instance, in the appointment of a new teaching staff, universities can play a more important role than they could have before, designating two of the five members of the Commission nominated each time to choose the more suitable applicants (the three other members of the Commission must belong to other universities and are nominated by drawing lots). In these aspects, as in others, the UNED operates like every other university. But, because of its special Statute as a national university, it must pay more attention to the national requirements and to its relationship with the education central authorities.

Unfortunately, some aspects of the relationship between the UNED and the state powers are not yet clear. There are some problems which need to be solved as soon as possible; for instance, the possibility for other universities to organise some courses at a distance. Nowadays, it seems that only the UNED organises such university courses and studies, but the freedom conferred by law to all the universities in academic aspects could open a new possibility. Furthermore, the relationship of the UNED's regional centres with the authorities of the Autonomous Regions, such as Catalunya, Basque Country, etc., must also be clarified. As has been said before, the UNED's regional centres are generally financed by regional or local corporations and institutions; it seems possible that this financing can be hindered in the near future, if the regional authorities want to implement a university policy not favourable to the UNED.

A result of all these problems is the necessity of a special law for the UNED sanctioned by the Spanish Parliament. This law has already begun to be studied, and, probably, it will be aproved in 1986.

But it must be clear that none of these existing problems seem to threaten the future life of the UNED. As a whole, the state powers are convinced that the UNED has been and continues to be a channel for the cultural and professional development of many adults, as well as a means of permanent modernisation, not only of university teaching, but also of the whole education system, in short, one way to a new future.

14

THE OPEN UNIVERSITY OF SRI LANKA

D.S. WIJEYESEKERA

Introduction

In recent times, there has been a growing conviction that eduction is not only for a privileged group in society or confined to childhood and adolescence, but that all people should have access to the extent and the kind of education which their full development requires. Thus education should be a continuous process from infancy to the end of life. Moreover, the recent education explosion has made it difficult for the national education system to keep pace with the demand for admission into existing institutions of higher education. It is in the light of these convictions and realities that the concept of open university attracted increasing attention of educationists, politicians and the public. In fact, a firm basis for the establishment of the Open University in Sri Lanka goes laid down in the Universities Act No. 16 of 1978. The Open University of Sri Lanka commenced its operations by incorporating into its system the External Services Agency (ESA) and the Sri Lanka Institute of Distance Education (SLIDE).

The new higher educational institution was ceremonially inaugurated by His Excellency the President of the Democratic Socialist Republic of Sri Lanka on 19 June, 1980, and became fully operative as of 22 July, 1980 with Dr. Gamini Corea as the Chancellor, Prof. P.D. Gunatilake as its first Vice-Chancellor.

Objectives

The main objectives of the University is to upgrade those who are presently employed. However, students who have not entered the conventional universities are able to obtain another avenue of higher education, together with those who wish to pursue courses of study for gaining knowledge for personal development.

It is essentially a home based university offering its own programmes of study leading to certificates, diplomas, degrees and post graduate diplomas and degrees. Students should be over 18 years of age. No specific entry qualifications are required except where specified but passes in six subjects at the G.C.E (O/L) examination would be generally advantageous. Exemptions up to a limit are given for approved qualifications.

The Open University adopts a multimedia study system developed by the open universities overseas with modifications to suit local conditions. The teaching methodology is through specially designed printed lesson material, audio-visual aids including audio and video cassettes, face-to-face teaching, seminars, workshops, laboratory and field work depending on each programme of study.

The educational programme has been designed to meet natural educational and training needs and to offer an opportunity to the many who have the dedication and drive to succeed.

Management Structure

The Authorities of the University

The Ordinance No. 3 of 1980, under University Act, No. 16 of 1978 as amended by Act No. 7 of 1980, and a new amended Ordinance came into force from 2 April, 1987.

In the Ordinance the authorities are:

(i) the Council
(ii) the Senate
(iii) the Faculty Boards

The Council of the University is the executive and academic body and the governing authority of the University and is chaired by the Vice-Chancellor.

The Senate of the University is the academic authority of the University and is chaired by the Vice-Chancellor. The University has initially the following three faculties:

(i) Faculty of Engineering Technology
(ii) Faculty of Natural Sciences
(iii) Faculty of Humanities & Social Sciences

The academic and the administrative head of each faculty is the Dean.

The Faculty of Engineering Technology shall have initially the following disciplines of study:

(i) civil engineering
(ii) electrical, electronics engineering and computer science and engineering
(iii) mechanical engineering
  a. textile technology

The Faculty of Natural Sciences shall have initially the following disciplines of study:

(i) mathematics
(ii) chemical & physical science
(iii) life science

The Faculty of Humanities & Social Sciences shall have initially the following disciplines of study:

(i) education
(ii) legal studies
(iii) language, management and social studies

Staff

The academic staff of the Open University are recruited in precisely the same way as the staff of other conventional universities and will virtually enjoy the same terms and conditions of service.

Full-time staff of the Open University consists of central academics, regional academics, educational and research assistants, administrative and technical staff, secretarial and clerical staff and others providing the back-up services. More than sixty per cent of these are employed at the Colombo headquarters of the University where academics are out-numbered by administrative and service staff who deal with admissions and the organisation of examinations and residential courses and oversee regional tutorial services and handle student and tutor records.

Central academic staff work mostly as members of course teams. They write course lessons, help produce related television and radio broadcasts and develop supplementary teaching material.

In addition to the University central campus, there are regional centres. Each regional centre is manned by a liaison officer, tutors, counsellors and a small administrative staff who oversee the University's organisation at the local level. Regional centres are responsible for the study centres where students come into personal contact with the University through the part-time tutoring and counselling staff.

Part-time staff are selected mainly from the conventional Universities and institutions of higher education. The staff of the regional centres allocate students to the part-time staff and coordinate their work. The break-up of staff is as follows:

Academic staff	153
Visiting staff	513
UN Staff	11

The Course Preparation and Production

The learning system

The multimedia learning system developed by the University is shown below (Table 14.1). The nature of the components is shown in the first column, the student response in the second column and the approximate percentage of study time which an average student would be expected to spend on each component in the last column.

Table 14.1
COMPONENTS OF THE LEARNING SYSTEM

Component	Students Response	Approximate study time (per cent)
PRINTED MATERIALS a) Printed texts b) Set books c) Recommended reading	Systematic reading	55-70
AUDIO-VISUAL DEVICES a) Course broadcasts on radio b) Course telecasts on television c) Films, cassettes, slides d) Broadcast notes.	Viewing and listening in conjunction with broadcast notes	0.5-10
DEMONSTRATIONS AND PRACTICAL WORK	Observing and doing practical work	0-15
TUITION AND COUNSELLING a) Individual and group tuition b) Individual and group counselling c) Residential Schools	Contact with tutors and counsellors; attending study centres; meeting other student; attending residential schools	10-15
ASSIGNMENTS AND ASSESSMENTS a) Practical experiments and self-assessments b) Tutor-marked assignments c) Examinations	Doing practical work or projects; doing written work; taking examinations	5-15

Course Material

Printed texts carry the central message of the course and is presented to the students in the form of LESSONS. A lesson is the amount of teaching given at one time and will take an average student with the basic prerequisites between 2 and 3 hours of study.

A full course lasting thirty weeks will consist of about sixty lessons which will be sent to students at regular intervals through the year.

Students will also receive a list of books which they are recommended to read. They are not expected to buy these books. They will be available either in the local libraries or in the libraries at the Regional Centres of the Open University.

Audio-Visual Devices

The Open University courses incorporate audio and video cassettes films, slides and audiovision packages. There would be radio broadcasts of twenty-five minutes duration of interest both to the public and the students. There will also be opportunities for the students of the Open University to view films and slides at the Regional Centres. The audiovision packages are booklets of diagrams together with pre-recorded tape cassettes containing a spoken commentary on the diagrams. To use an audiovision package, the student simply has to look at the diagrams and listen to the tape.

Demonstration and Practical Work

Laboratory and workshop facilities will be made available at selected Study Centres, where students will have the opportunity to watch the demonstration and engage in practical work. Students taking courses in science and technology will, in general, be required to attend these Study Centres for observation classes and for doing basic experimental work.

Tuition and Counselling

Although the printed material and audiovisual devices are designed to help students to learn independently, personal tuition and counselling will be available at the Regional Centres of the Open University.

Each number of the part-time staff mainly recruited from the teaching staff of other universities and institutions of higher education is responsible for about twenty Open University students.

The staff would grade and comment on written assignments, hold face-to-face tutorials for groups of students at local Study Centres and are available to help individuals with their study problems.

When a student begins his studies at the Open University, he would be assigned to a staff member who helps with the academic content of the course and helps him make the best use of the learning system. Students will be able to meet the staff at Study Centres which are as near as possible to their homes.

Assignments and Assessments

Assignments are an important part of the learning system because they allow students to assess their own progress.

Tutor-marked assignments are mainly written work. There will also be project-type assignments which involve experimental or research work and the collection and analysis of data.

Overall grades from assignments are reported back to students within a few weeks. Tutors add their comments and detailed notes to the marked scripts; this 'dialogue' with the student is a valuable part of tuition.

At the end of each course every student takes written examinations. In common with other Sri Lankan universities, the university examinations have independent external examiners to ensure that academic standards are maintained. The examinations results, combined with assignments grades throughout the year, determines whether or not a student has successfully completed a course.

Courses Being Offered Now

Academic Organisation

The different academic programmes of study conducted in all three media (Sinhala, Tamil & English) lead to qualifications at different levels, i.e. certificate, diploma, degree, post-graduate diploma and post graduate research degrees.

* Certificate in Pre-school Education
* Certificate in Entrepreneurship
* Certificate in Professional English
* Diploma in Technology (civil, communication, electrical, electronics, mechanical, textile).

The council has approved the award of the degree of Bachelor of Technology subsequent to the diploma and with two further levels of study.

Students

Particulars of students registered in the University are given below (Table 14.2).

Table 14.2

NO. OF REGISTERED STUDENTS (FROM 1980–1987)

Programme of Study	1982	1983	1984	1985	1986	1987
Postgraduate Diploma in Education Part I & II	1240	614	1365	1377	1377	2994
Degree in Law	—	—	—	556	909	1569
Certificate in Pre-School	366 (ESA)	533	176	271	376	606
Certificate in Professional English	763	2354	1757	2449	2449	2681
Certificate in Entrepreneurship	—	1174	395	183	76	230
Degree on Science	—	—	1421	1421	1624	1570
Diploma in Technology	—	2184	759	2805	3252	3469
SLIDE Courses	1630	752	587	217	104	—
Total	3990	7631	6460	9279	10167	13059

* Bachelor's Degree in Science (B.Sc.)
* Bachelor's Degree in Law (LL.B.)
* Post-Graduate Diploma in Education
* Post-Graduate Research Degree
(M. Phil., Ph.D.)
* Continuing Education Programmes

Regional Educational Services

The Regional Educational Services (RES) of the Open University was established to cater for the smooth operation of the education programme drawn in the respective fields of study offered by the three faculties of the Open University.

There are altogether fourteen regional/study centres spread throughout the country. Four of these are regional centres in major towns of Colombo. Kandy. Jaffna and Matara. While the remaining ten are study centres in provincial towns with a distance of about fifty miles from one centre to other. at Ambalangoda. Amparai. Anuradhapura, Badulla, Chilaw. Galle. Kalutara. Kegalle. Kurunagala and Ratnapura. Since the course material is distributed from these centres. University does not expect a student to travel more than fifty miles to attend to his/her educational requirements.

Director (RES) is assisted by the Deputy Director (RES) stationed in OUSL headquarters at Nawala and four Assistant Directors head the four regional centres. Other ten study centres are manned by officers in charge of the OUSL staff.

These regional/study centres provide facilities for counselling face-to-face teaching and other contact sessions, distribution of course material and examinations. Further distribution of applications and the registration activities too are among the important functions of these centres.

Regional centres are equipped with audio and video equipment, while Study centres are equipped with audio facilities. Mini libraries with all the OUSL publications and some valuable reference books are organised in all the regional/study centres.

Evaluation—Assignments and Examinations

A student's progress is assessed continuously throughout the course of studies by means of a specified number of assignments. These will be graded and returned to the student together with the tutor's comments. Continuous assessment may also include examinations, laboratory work, field work etc. No student will be permitted to sit the final examination unless he obtains a pass in the continuous assessments.

At the end of each course an examination is held at selected centres. The final grade for each course will be determined by the overall result of the continuous assessment and the examination.

CREDIT SYSTEM

Table 14.3

Credit Rating	1	2/3	1/2	1/3	1/6	0
Second Digit (5th Character) of Code	6	4	3	2	1	0

A student may not register for a course beyond the foundation level unless 4 credits have been obtained or is exempted from this requirement by virtue of other qualifications. A student can formulate his own programme of study by selecting an approved combination of courses. Freedom of choice to design the programme of study is enhanced by the availability of 1/2 credit, 1/3 credit and 1/6 credit courses. The University will award certificates, diplomas and degrees with or without honours on the acquisition of a specified number of credits as specified level (Table 14.3).

Post-graduate studies will be mainly research based. Registration for a post-graduate degree requires the acquisition of or the exemption from the requisite number of credits at specified levels.

Finances

The total recurrent expenditure of the Open University of Sri Lanka for the year 1987 is estimated at Rs. 34.4 million, out of which Rs. 15.6 million is on account of salaries and wages of its permanent staff, while Rs. 4.6 million is allocated for the staff employed on visiting basis. To cover this expenditure, the assistance given by the government is a grant of Rs. 14.2 million. The collection from student fees amounts to Rs. 14.9 million, while the balance amount is estimated to be earned from sale of publications and by way of interest etc.

The capital development project of the University which is estimated to cost about Rs. 261 million spreading over a period of 8 years beginning from the year 1981, is to be fully funded by the Government of Sri Lanka. Up to the year 1987, the government had allocated a sum of Rs. 137 million on account of this project. (The amount allocated for the year 1987 is Rs. 27.3 million). In this, the government also makes available outright grants for rehabilitation and maintenance of capital assets of the University. The grant for the year 1987 is Rs. 1.4 million. Further, a sum of

Rs. 1 million is allocated on account of the purchase of library books and periodicals, and Rs. 6 million for the purchase of furniture and equipment for the year 1987.

Issues—Problems Being Faced

The main challenge being faced is the adoption of programmes of study in science and technology through distance education. Its importance lies in imparting practical exposure to the students in the absence of sufficient video material. Another issue faced is in the production and development of audio and video material and in supplementing the primary media which is the printed material being used.

A major issue is the lack of training facilities to newly recruited academic and administrative staff in distance education methods to be adopted and also in the upgrading of middle level and senior staff on the modern development in distance education.

15

THE SUKHOTHAI THAMMATHIRAT OPEN UNIVERSITY

D. RAVINDRA PRASAD

Among the institutions which Thailand can take legitimate pride in is the Sukhothai Thammathirat Open University (STOU). The STOU occupies a unique place not only within its national boundaries but also among the open universities in Asia. In the less than ten years of its existence it has attracted the attention of scholars and educational planners interested in distance education in Asia.

It is the limited opportunities provided by Thailand's conventional universities which led to the establishment of a non-formal system of education. Until recently, Thailand had 15 national universities and institutions of higher learning which were expected to provide skilled manpower for Government services as well as to others, but they were neither in a position to meet the increasing demands for higher education nor the requirements of trained and skilled manpower. Therefore, the first open admission university—Ramkhamhaeng University—was established in 1971. The main aim of this university was to make education accessible to those who could not have access to it in the conventional system because of financial, geographical and economic reasons. The university adopted an open admission policy in which attendance was not insisted upon. Over the years, the university expanded its activities and it now has more than one lakh students on its rolls. Still, the increasing demands for educational opportunities could not be met. There was, thus, a need to supplement educational opportunities provided by the existing universities. There was a need not only to provide for lifelong education, but also to improve opportunities for higher education for people living in distant and remote rural areas. This led the Government commit itself to democratise education, to compensate for the missed opportunities and to meet the desire of the people to improve themselves without leaving their jobs or homes. It was in this context that one of the education committees appointed by the government in the mid-seventies recommended the establishment of a distance education university in Thailand. The members of the committee were impressed by the experiment and experience of the (UKOU) and felt that a similar institution was needed in a developing country like Thailand. It felt that the open university system would not only provide greater access to the increasing population but also had the potential to improve the quality of education in general.

A planning committee was appointed to prepare the project report which was submitted to the government in 1978. Based on the recommendations of the committee, the Sukhothai Thammathirat Open University was established in Thailand by a Royal Charter on 5 September, 1978. What is important is that the Chairman of the Planning Committee, Dr. Wichit Srisa-an, who was also a member of the earlier Education Committee, was appointed as the first Rector (Vice-Chancellor). This gave him an opportunity to implement the ideas contained in the report.

Objectives

As an open university, the objectives of the STOU are different from those of conventional universities. It was established not only to provide an alternative system of education but also to open up educational opportunities to all those who had missed such opportunities earlier but were now interested in higher learning. Its philosophy is to offer lifelong education to enable the people to improve their quality of life. Specifically, the objectives of the STOU are:

a) to provide and promote university and professional education to enable people to raise their educational standards in response to the needs of the society;
b) to promote research to generate new knowledge and to apply it to national development;
c) to render public service to society by disseminating knowledge so as to promote personal development and professional competence; and
d) to preserve and develop national culture.

The goals and objectives of the university as given in the Royal Charter are as follows:

> As an open university, Sukhothai Thammathirat Open University holds to the principle of lifelong education, aims at improving the quality of life of the general public, seeks to increase the

educational qualifications of working people, and strives to expand educational opportunities for secondary school graduates in response to the needs of individuals and society.

Academic Programmes

During the last few years the STOU has been able to plan and implement a variety of educational programmes. The university offers two types of programmes, viz., degree and non-degree. It offers both degree and non-degree programmes in the areas of Education, Management, Law, Economics, Political Science, Liberal Arts and Communication Arts. The degree programmes are based on the needs and requirements of the community. Normally, they are for four years, but since most of the students are not full-time ones, and hold regular jobs, they are allowed to complete the programmes in 12 years. Non-degree programmes are specially designed to develop the personality of the individual. The aim is to enable the working people to develop their skills, knowledge and professional competence to enable them to work efficiently and effectively in their jobs. An important feature of these non-degree programmes is that anyone without any educational background can join the programme and on successful completion is given a Certificate of Achievement. Those who join such courses are called Associate Students.

An important activity of the STOU is the joint programme offered by it. In collaboration with public and private organisations, the university designs special programmes to meet the specific needs of those organisations. For example, the STOU offers a Law Degree Programme for Non-commissioned Police Officers in collaboration with the Police Department. It offers in-service training programmes in collaboration with the Department of Local Administration, to the staff of the special district and village officers. For the members of the Social Welfare Council of Thailand, the university offers training programmes. Such cooperative projects are made possible because of the multi-media instructional methods which the STOU adopts. In these academic programmes, there is a tremendous flexibility in the choice of the courses.

The organisation of the university does not conform to the traditional pattern as in other distance teaching universities. The academic programmes in the university are offered by schools instead of departments. Each school has a Board of Studies with 3 to 7 members elected by the full-time staff of the school. The Board of Studies is in charge of all academic and administrative matters of the school. Another body of the school is that of Academic Assessors, with 5-11 members who are outside experts. Their function is to advise on academic standards, curriculum development, instructions and other educational services. Presently, there are ten schools in the university. They are: (1) Liberal Arts, (2) Educational Studies, (3) Management Science, (4) Law, (5) Economics, (6) Health Science, (7) Home Economics, (8) Agricultural Extension and Cooperatives, (9) Political Science, and (10) Communication Arts.

Academic Staff

As instructional methods are different from those of conventional universities where continuous face-to-face interaction is the rule, the STOU has a smaller staff on its rolls. To prepare its courses, both print and audio-visual, the university enlists a large number of academics on a part-time or contract basis. This gives the university a large measure of flexibility in enlisting the support of the academic talent in the country. The university has about 200 full-time academic staff on its rolls and about 3000 part-time academics from all over the country who are associated in producing the academic programmes.

Students

Students are admitted by the STOU once a year. Those who fulfil the admission requirements are admitted without any examination or test. Admission requirements vary from course to course. A large number of students seek admission every year. For example, the new enrolments in recent years has been about 83,000. About 30 per cent of the students were enrolled for Management Sciences and 40 to 45 per cent of the students have enrolled for Educational Studies and Law. This explains the comparative importance of these programmes. More than 50 per cent of the students are Government employees and about one-fifth come from the private sector. The unemployed constitute about 10 per cent. Nearly 75 per cent of the students are in the age group of 17 to 30 years and 10 per cent are in the age group of 31 to 35 years. This explains the fact that a majority of the students who have missed opportunities in the early age, join the open university either to improve their qualifications or to equip themselves for different vocations. There are also, however, large number of students who are over 60 years of age.

Methods of Instruction

The STOU adopts a multi-media approach to instruction. Print material and radio and television broadcasting enable the students to learn on their own without having to attend classes. In addition, audio and video cassettes of various courses are available at the study centres. Tutorial and cunselling sessions are also arranged at the study centres. However, the print material constitutes the basic medium and audio-visuals provide support to it. The university broadcasts radio and TV lessons by using existing radio TV networks. Ten to fifteen hours of TV and 49 hours of radio time per week have been given to the university. An interesting feature of the university is that each student is expected to study 15 to 18 hours per week for each course. Of this, two-thirds of the time is spent on reading the print material and the remaining one third is spent on radio and TV or attending tutorial sessions. About 70 to 80 per cent of the students take advantage of the radio programme. The university is planning to extend its television broadcast time to 40 hours a week. Another interesting feature is that both the print material and radio and television broadcasts are made use of by the general public as well as students in the conventional universities, in addition to students of the STOU. Thus, the university serves a social purpose as well as an educational cause.

Evaluation System

The STOU has adopted a grading system to assess the performance of students. The grading scale comprises three grades: 'H' (Honours), 'S' (Satisfactory), '(U)' (Unsatisfactory). The minimum grade required for a student to successfully complete a degree programme is 'S' in all courses in the programme. To secure a second class honours degree, a student has to obtain a grade 'H' in at least half the courses required for a degree. For a first class honours degree, a student must obtain 'H' in at least three-fourths of the number of courses required. After completing the sufficent number of courses for a degree, the student must participate in an intensive residential workshop which is a culminatory activity and which also contributes to the requirements for graduating the programme (Chaya-Ngam, 1987 : 325). The examinations are organised in all the provinces. In 1986, for example, examinations were conducted in about 100 centres throughout Thailand. Examination centres are normally located in the study centres.

Administrative Organisation

Though the STOU functions under the guidance of the Ministry of University Affairs, it enjoys a great deal of autonomy. Its Chief Executive is the Rector. The two main governing bodies of the university are the University Council and the Academic Senate. The former is the supreme governing body of the university while the latter is mainly responsible for academic affairs.

The University Council has the following functions: 1) Supervision of the conduct of all university affairs; 2) policy formulation; 3) establishment of rules and regulations of the university· 4) approval of the awards of degrees, diplomas and certificates; 5) establishment, dissolution and amalgamation of any institute, office or academic division; 6) approval of the affiliation of other institutions of higher education; 7) appointment of Rector, Vice-Rectors, Directors, Professors and other members of the faculty; 8) establishment of rules for finance and property management at the university; 9) appointment of *ad hoc* committees. The University Council is chaired by a President who is appointed by a Royal decree, and it comprises representatives of such Government bodies as the Ministry of University Affairs, Public Relations Department. Post and Telegraph Department, and Mass Communications Authority, and a few other external bodies. Additionally, it has a representative of the Academic Senate.

The Academic Senate is chaired by the Rector and comprises Chairmen of Schools, Directors of Institutes and Offices, Professors and a number of elected representatives from among the faculty members. The functions of the Academic Senate include: 1) setting academic standards and supervising all matters connected with curricula, instruction and evaluation; 2) proposing the award of degrees, diplomas and certificates; 3) proposing the establishment, dissolution and amalgamation of any institute, office or academic division; 4) considering the affiliation of other institutes of higher learning: 5) proposing the appointment of people from various external bodies as members of the University Council; 6) giving advice on the appointment and dismissal of members of the faculty; 7) developing teaching, research and other educational services of the university: 8) advising the University Council on academic affairs.

The Rector is the academic and administrative head of the university. The university administration functions under his overall guidance, supervision and control. There are five Vice-Rectors to assist him and they are in charge of the various segments of the university like administration, academics for development.

The organisational components of the university are: 1) the office of the Rector, which deals with correspondence, finance and supplies, personnel and general administration; 2) the office of Educational Services, in charge of the regional and local study centres and the tutorial and counselling services; 3) the office of academic affairs dealing with curricula, instruction, research, textbooks and preparation of instructional material; 4) the office of Educational Technology, responsible for the production of instruction material, provision of radio and TV services, audiovisual services, conducting research on and evaluating methods of instruction; 5) the office of Registration, Records and Evaluation dealing with admission and academic achievement records; 6) the office of the University Press looking after the various printing operations; and, 7) Documentation and Information dealing with library services and which acts as a resource centre for students and staff. Each of these offices is further divided into divisions. On the academic side there are as many as ten schools (Chaya-Ngam, 1987 : 326-329)

Study Centres

To help the students who are scattered all over the country, the university has established a network of study centres which are located in the existing educational institutions. These study centres organise tutorial sessions and other educational services, provide books and other instructional material to the students and act as examination centres. This is also the place where all the information about the university is available. Thus, these centres act as a link between the students and the STOU.

In addition, there are 11 regional centres in important regions of the country and they are located in the regional universities. Their main functions are to coordinate the activities of local study centres, sub-regional study centres and others; to recruit resource persons required for the study centres and to act as a clearing-house for educational and academic activities in the region.

Special study centres are set up by the university for specific training purposes. In 1986, there were seven such centres for agricultural extension and cooperatives and two for health sciences. They are mainly concerned with recruitment of resource personnel, laboratory training of field work, conducting tutorial sessions for special courses, etc.

Economics of Distance Education

Cost-effectiveness is one of the advantages that is generally alluded to distance education. Per capita expenditure in this system would be much less when compared to conventional education. This is one of the reasons why most governments have opted for the establishment of open university. It is difficult to say whether it is true of all the open universities, but it is certainly true in the case of the STOU. Unlike the open universities elsewhere, the government allocations to the STOU are much less. Operating costs also are less when compared to conventional universities.

A comparison between the selective-admission universities of Thailand and the two open universities, STOU and Ram Khamhaeng University, on operating costs per head is indeed revealing. In 1980, the average operating cost per head of the two open universities amounts to as little as 2.13 per cent of the corresponding average figure of the selective-admission universities in humanities, 3.85 per cent in law, 4.4 per cent in social-behavioural sciences, 3.11 per cent in education and teacher education, 4.91 per cent in natural sciences, and 11.35 per cent in business administration and commerce (Srisa-an, 1987 : 521-523). The operating cost, however, does not include investment costs such as for building, equipment and infrastructure. A comparison of the operating and capital cost per head between the STOU and other universities based on 1982 figures shows that the STOU's average cost ranges from a fifth to a fiftieth of average costs per student in various other universities (Srisa-an, 1987 : 523-524).

Considering the increased dropout rate expected in an open university system, an interesting comparison has been attempted between the STOU and the selective-admission universities on the cost per graduate, adjusting the actual cost to accommodate the dropouts. The cost incurred by the STOU for every successful graduate is found to be as little as about 5 per cent to about 55 per cent of the corresponding figures of the other various universities of Thailand (Srisa-an, 1987 : 523-525). The private cost per student in the STOU is found, by and large, lower than those in other institutions (Srisa-an, 1987 : 524-525). And, since students of the STOU are working adults, the opportunity costs could be considered minimal.

Conclusion

During the short span of its existence, the STOU has made a mark in the educational field of Thailand. The quality of education provided by it is high and compares favourably with other conventional universities. The degrees awarded by the STOU are recognised and accepted throughout the length and breadth of the country, both in government and private organisations. The STOU involves several outstanding academics of the existing universities and institutions in the formulation of academic programmes and preparation of the course material, thus adding credibility to its own programmes. Even its critics would not doubt the quality of the programmes as they are prepared by men of excellence from all over the country. Today, the material produced by the STOU is being used by the students of conventional universities as well as others. This is indicative of the public recognition to the quality of education imparted by the STOU.

The future plans of the university include launching of a few new courses and also providing facilities for research work. To strengthen and improve its quality of service, the open university is collaborating with other organisations and universities to acquire advanced technology as well as software. For example it plans to acquire BBC-produced English language TV programmes, set up videotex network in collaboration with the University of Guelph in Canada and develop computer-based instruction in collaboration with the University of Ackron in the USA.

The university has largely succeeded in providing lifelong education to the people of Thailand at reduced costs. It has democratised education and has provided educational opportunities to many who could not have access to conventional universities. The university is offering its academic programmes at reduced costs without sacrificing quality. Its methodologies are very scientific and effective. The fact that more and more students join the open university, both for degree and non-degree programmes, is an indication that the educational opportunities provided by it help in improving the quality of life of the people and this is a significant contribution to national development.

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16

DEVELOPING DISTANCE LEARNING SYSTEMS THE UKOU EXPERIMENT: SOME LESSONS

RALPH C. SMITH

General

The open university has been described as the most important innovation in British education in the last half-century. It has pioneered:

- the development of advanced, multi-media distance teaching methods.
- the introduction of degree courses for home-based students without formal educational qualifications.
- a comprehensive continuing education programme to meet the training and technical updating needs of industry, commerce, the professions and individuals.

Since its foundation in 1969 the university has gained a national and international reputation for the quality of its educational programmes and teaching techniques. By 1985, it had enabled over 70,000 men and women to gain degrees, who might not otherwise have been able to do so. And a further 76,000 had benefited from the university's rapidly expanding range of technical, commercial and professional updating and retaining courses and packs. They include management education courses, which attracted over 2,500 students in their first year, and multi-media learning packs on the use of microprocessors in industry, which have been used by well over 30,000 managers and engineers.

These and other developments have brought recognition from many professional bodies, including those covering accountancy, engineering, computing, personnel management, psychology and town planning. Collaboration between the university and other education and training institutions and the government is growing rapidly.

For many individual students, success in their open university work has brought recognition in the form of promotion, a change of career, or improved performance in their work.

The main campus of the open university which covers 70 acres, is at Walton Hall in Milton Keynes, some 50 miles north-west of London. There are thirteen Regional Offices in the UK which oversee a total of 250 Study Centres. Buildings at Walton Hall cover 600,000 square metres (see Appendix), Regional Offices total 23,000 square metres and warehouses over 16,000 square metres. This is a radically different provision from a normal university, particularly the size of the warehousing operation which is necessary for a major distance learning operation. The differences are also reflected in the staffing pattern. Of approximately 3,000 full-time staff (including the special BBC. production unit) in January 1985, less than a quarter were academics. A summary of the basic statistics of the UKOU, including staffing, is provided in the Appendix.

Some Special Features of the Open University

The university origins can be traced back to a speech made in September 1963, by Harold Wilson, later to become Prime Minister. But it took six years for his coolly received proposals for a "University of the Air" to become reality. In 1969, against a backcloth of considerable scepticism, the Open University was granted its Royal Charter. The years since have seen those doubts evaporate, as yesterday's startling innovations have become part of today's accepted education life.

Students: Open to All

The university broke convention immediately by not insisting on formal entrance qualifications for its degree courses; hence, the open in its title. Admission is based on 'first-come, first-served' principles. It is left to those applying, with guidance from university staff if needed, to decide for themselves if they are determined enough to study for a degree.

Thus, whereas conventional university students study full-time, form a relatively homogeneous group, need to pass exams to get into university and meet regularly with lecturers and other students; most open university students have full-time jobs, study part-time, are consistently highly motivated and have a wide variety of educational backgrounds and ages.

Education at Home or Work

The university has made higher education available to everyone, irrespective of age, geographical location, domestic or work ties. Those wishing to study, no longer need to travel long distances to get expert teaching: it now comes to them, through the mail and on television and radio. These public media have allowed academics to bring 'live' course material direct to students throughout the United Kingdom–drama, major scientific experiments, significant historical events, fascinating social records, personal insights and interviews with leading thinkers. In essence it has meant that education has been taken to students rather than the converse.

A Quality Provision through Multi-Media Techniques

From the outset there has been an over-riding concern that the quality of the learning made available to the distance student should be high and, added to this, is the realisation that the institution's approach to teaching has been there for all to read, hear, see and criticise. As a result, the university has developed innovatory techniques for designing, teaching and monitoring the effectiveness of courses and learning materials. Many of these have now found their way into teaching in other educational establishments, within the United Kingdom and abroad.

Open university courses are created not by individual academics but by teams of people, often drawn from several different disciplines or faculties. Outside consultants may also be invited to contribute. All components of the multi-media learning packages are produced by these course teams, who work in collaboration, reading and commenting on each other's work as it progresses through the various draft stages. The teams include teaching and support staff-designers, editors and BBC producers.

Before a course goes into production it is vetted by external assessors from other higher education institutions. Sometimes, a pilot version is developmentally tested by a group of students. The whole process can take over two years before students can take the course with a minimum possible time of one year in special cases. Once the course is being taught, feedback from students becomes important and the results of surveys are carefully considered. Few, if any, universities take such pains to ensure that what they teach is of the highest possible quality.

The Different Academic Programmes

The university offers several ways to study. The undergraduate programme covers a series of courses taken over a period of years leading to a degree. The continuing education programme has a very wide range of single courses at different levels. some leading to diplomas and certificates and works closely with users in in-house training programmes. The higher degree programme provides opportunities for both taught and research-based post-graduate study.

Undergraduate Programme

In 1969, a Royal Charter established the open university as 'an independent and autonomous institution' authorised to confer its own degrees. Two years later, in its first teaching year, 24,000 men and women started studying for degrees.

Since then over 70,000 people have graduated. In any one year, there are 65,000 undergraduates at various stages of their degree studies. Students come from many different backgrounds and occupations. They may be aged from 18 to over 90—although the median age is 34 and the vast majority are aged between 25 and 40. The proportions of men and women are roughly equal.

Open university undergraduates typically put in around 14 hours study a week, but when they study, is up to them. They can take a year off if a change of job, house move or arrival of a baby makes studying difficult.

(a) Credit System. The university awards BA and BA (Honours) degrees, which are built up through a credit system. Each course rates as either a full or half credit, depending on the amount of work involved. Six credits qualify a student for an ordinary degree and eight credits for an honours degree. A full credit course involves 32 weekly units of work, each demanding 10-14 hours of study. Students can combine courses from a wide range of disciplines mapping out their own degree programmes. However, those wishing to study for a recognised qualification, say in town planning or psychology, follow an approved combination of courses.

If a student has successfully completed previous higher level study, he or she may gain exemption from up to three credits. In the same way, increasing numbers of students are now using open university credits to gain exemption from parts of courses in other higher education institutions.

(b) The Courses. Undergraduates now have a choice of 131 courses, spanning the arts, social sciences, mathematics, science,

technology and educational studies. Many are vocational, such as *Managing in organisations* and *Policy making in education*. Many are technological, such as *The digital computer* and *Man-made futures: design and technology*. Among the many other subject areas are drama, art, psychology, economics, music, mathematics, biochemistry, earth sciences, genetics, history and politics.

Undergraduate courses are offered at four different levels—foundation, second, third and fourth. All students have to take a foundation course, which assumes no previous knowledge of the subject and provides a broad introduction to a range of subjects and study skills. After that, they can choose courses at any level, though naturally they are encouraged to progress sensibly to the more demanding higher level courses.

(c) Teaching Materials. The printed word still remains the most accessible and easily used means of communication. It does not need a power supply, it can be transported easily, it can be used in a variety of ways and, most importantly, most adults know how to use it.

Correspondence texts written by members of the course team are, therefore, the central component of a course and are normally expected to take up to 60 per cent of student's time. They are sent to students at regular intervals, often supplemented with reading from set books. The test 'units', as they are known, are designed to motivate the independent learner and to make studying easy, with photographs, diagrams, large margins for notes and self-assessment questions.

Multi-media support to correspondence texts comes in the form of television and radio broadcasts, produced in partnership with the BBC, and video and audio cassettes. These are an integral part of most courses and can take up around 10 per cent of a student's time on average. For many science and technology subjects, they are essential.

Home experiment kits are sent to students on some courses, particularly science and technology, enabling them to carry out experimental work. One kit contains over 200 items of equipment, including chemicals, glassware and a miniature microscope. Another includes a laser.

(d) Personal Contact with Staff. Open university students also have access to locally-based personal tuition at 250 study centres spread throughout the UK; they can also contact their part-time tutor by telephone. The part-time tutor-counsellor who guides them through

their foundation course also acts as a personal advisor throughout their academic career with the university.

The study centres are run by the university's regional network. For administrative convenience, the UK is divided into thirteen regions, each of which has its own office. There, a small staff of part-time academics and administrators appoint, train and monitor the work of the 5,000 part-time staff and provide advice to intending students.

For all foundation courses and some higher level courses, students have to attend a one-week residential summer school at a university campus. Up to 30,000 students a year receive intensive tuition and take part in laboratory work, fieldwork, seminars and informal discussions.

(e) Assessment. The university uses a combination of continuous assessment and end-of-year examinations. Assignments help students to check their progress. Some, mainly written work, are marked by local tutors; other multiple-choice question papers are marked by computers at the university's headquarters in Milton Keynes. The grades achieved are reported back to students, usually within two or three weeks. Tutors add their comments to marked scripts, providing a useful correspondence dialogue with students.

At the end of each course, a student takes a three-hour written examination, normally in October or early November. As with other universities, these are scrutinised by external examiners to ensure that academic standards are maintained.

The final course result is based on the combined grades achieved for the examination and continuous assessment.

Continuing Education Programme

With the undergraduate programme firmly established, the university turned its energies to another vitally important educational initiative—the development of its contribution to continuing education in which the aim is to meet the needs of a changing society.

The multi-media methods so successfully developed for undergraduate courses are used to help individuals, either at home or at work in industry, commerce and the professions specifically, update and expand their skills and knowledge. The result has been a rapidly growing range of materials for individual or in-house training programmes. Some are complete self-tuition packs, with printed texts and audiovisual aids. Other are run in the same way as undergraduate courses, with tuition and assessment but the trend is towards increasing collaboration with a wide variety of groups and bodies responsible for different aspects of training and retraining.

The scope of the university's involvement in continuing education has grown year by year and in 1985 it had over 50,000 students and clients.It is divided into six sectors of activity.

(a) The Open Business School. In the first year the Open Business School attracted enough students to make it one of the largest such schools in Europe. Its courses cover many key management concerns, including techniques for effective management, accounting and finance, personnel topics, marketing and starting a new business. Information management and the new technologies involved will be the other major area to be developed.

The majority of students are junior and middle managers with less than ten years managerial experience. Two-thirds are sponsored by their employers, many of whom have taken block bookings for courses.

(b) Scientific and Technological Updating. One of the latest growing areas of the continuing education provision is the development of a wide range of scientific and technological updating courses and study packs that provide a flexible and cost-effective resource for industry. For example, as part of a major collaboration with the Science and Engineering Research Council, the university is developing a modular programme of courses at MSc level to update engineers, scientists and managers. Courses cover such topics as robotics, polymer engineering, process engineering, software engineering, resource utilisation and quality systems. There is also series of short introductory courses on data processing, a study pack on biotechnology and a series of courses in agriculture.

(c) Health and Social Welfare. A range of in-service materials for updating both professional and voluntary workers has been produced. The materials are topic-based, multidisciplinary and flexible.They are used for in-service training or individual study. Short study packs cover such topics as *Caring for older people, The law and family life, Caring for children and young people, Abuse in families, Rehabilitation and a systematic approach to nursing care.* "The handicapped person in the community" course has been taken by at least 7,000 social and health workers as well as educators.

(d) Professional Development in Education. For over a decade,

the university has had a major impact on the professional development of those working in education. This is now backed up by a series of study packs and courses, some leading to diplomas. These study packs, designed for individual or group use, provide information, practical guidance and, often, activities to use with pupils and students. Topics include mathematics education, language use, education for family life, micros in schools and curriculum development.

(e) Community Education. The everyday learning needs of parents, consumers, employees and members of the community are catered for by study packs and courses. They deal with aspects of health and lifestyles, parenting, work choices, planning retirement, home energy conservation and community issues like race relations and school governing. The materials are offered in a variety of formats and their "informal" use by professional and voluntary workers is actively encouraged.

(f) Personal and Cultural Education. Personal Interest Packs enable many people with an interest in the arts and sciences, but who do not have the time to study formally, the opportunity to develop their new or existing interests by studying materials when it suits them. Packs available cover music, literature, religion, modern European and local history, art and the changing countryside.

Research and Higher Degree Programme

Research: The open university is no different from any other university in the emphasis and importance it places on research and higher degree studies. Despite the need in the early years to concentrate academic resources heavily in course production, the university has gained recognition in a number of specialist fields, most importantly brain, energy and petrogenesis research.

Higher Degrees: The university offers both full-time and part-time opportunities for research-based higher degrees, and is now developing a number of taught higher degrees.

Unlike the undergraduate programme, for higher degrees the university insists on the same minimum academic entrance qualifcation as other universities—upper second class honours degree in a related subject.

In 1984 there were over 850 post-graduate students of which 170 were full-time research students, over 540 were part-time research students and over 140 were on part-time master's courses. The latter numbers are increasing rapidly.

Finance and Unit Costs

(Derived from a paper: A Comparative Study of Some Performance Indicators for a U.G.C. Funded University, a Polytechnic and the Open University; Smith R.C., 1986—to be published.)

The period studied was the conventional academic year 1983-4 with open university figures for its 1983 and 1984 years being adjusted to take the different bases into account. During that period, the open university represented, in full-time equivalent student load terms, a conventional university of 36,000 students of which some 32,500 were taking courses in the undergraduate programme. Out of this total expenditure of some £70M, £59M could be associated with the undergraduate teaching programme, c.£6.5M with the research programme and c.£4.5M with the continuing education programme.

The unit cost on the undergraduate programme was, therefore, £1,800 per equivalent student year with subject variations between the extremes of £1,480 per year for arts and £2,340 per year for science. This compares with the UGC norm of £3,510 per student year or over £4,700 per year if the student maintenance grant is included. The success rate of 72 per cent in the open university is lower than that in the conventional university, 98 per cent, but even including that, the cost advantage to the open university is close to 2:1. For the open university, this total expenditure is split approximately 44 per cent on overheads (mainly the administrative operations centrally and regionally), 16 per cent on faculty costs (mainly academic staff salaries), 21 per cent on materials production (mainly audiovisual costs) and 18 per cent on interactive teaching costs (mainly fees for part-time tutors and counsellors).

Rationale for a Distance Education System

For some governments that introduce distance learning systems, the primary reason is to relieve the pressures arising from an increasing birth rate, resulting in a swelling number of applicants to their existing universities. In the UK this was not the case and indeed, to cut back on universities in general based in part on falling numbers in the age cohorts. The UKOU too suffered, and is suffering from this cutback.

Political willpower, to Prime Ministerial level, played a large part in ensuring the successful launch of the British Open University in 1969 (see for example Walter Perry: *Open University: A Personal Account by the first Vice-Chancellor*). Similarly the planning for the Open Tech programme in the late 1970s was inspired by one of the ministers in the British Government of the time. More detailed comments on the launching of The Open Tech Experiment can be found in an article with that title (Media in Education and Development: December 1982, R. Smith).

The reasons behind these political initiatives are several. Firstly, in the case of the UK Open University, there was the pressure to provide a second opportunity for those citizens who have the ability to continue to higher educational levels but who finished their formal education for other reasons. Distance learning provided them with the opportunity to get back on to the educational treadmill, or even on to it for the first time. A particular group who benefited from this in the UK was women. In a more general context this can be seen as a pressure to realise the national potential of a country through education and produce a more enlightened population equipped with the knowledge and capacity to evaluate and improve the quality of their own lives and those of others.

Then, there is the pragmatic pressure to provide more highly qualified manpower for the country and to maintain the level of the qualification of that manpower as time passes. The individual of today needs more frequent updating as the obsolescence of knowledge often renders initial education inadequate in many respects. Thus, whilst the open university certainly created some vocational courses in its original undergraduate programme, it was felt to be vital that a coherent undergraduate programme should be created at an early stage and the thrust towards vocationalism should come later. Thus, seven or eight years were to pass before the university undertook what was called a 'second leap forward' into its continuing education programme. This was specially geared to responding to the vocational and community needs of the country as a whole.

Finally, the distance learning courses are usually cheaper than other forms of education and have the facility to be more flexible. For example, students have to spend less time away from their home or work and can study in their own time. Educational planning is notoriously difficult. In Britain we managed to build colleges of education in the 1950s only to close them in the 1970s and the level of capital investment required in programmes of that type is quite high. The use of an open university system can mean a more flexible approach to changing demands in areas of professionalism such as this.

There is also the challenge of harnessing the new technologies. How can they best be used to improve the quality of the education process in general? What are the benefits of the different media? Considerable research has now been undertaken on this and the UKOU has found, for example that the humble audio cassette is much appreciated by students and is educationally effective; that its unique partnership with the BBC has been of considerable advantage: that science courses do not need the high proportion of in-laboratory time normally allocated to them in the conventional system; that good print is still the major learning medium, although in some courses, particularly at higher levels, the audiovisual medium can play the dominant role.

Issues that Arise

Distance learning systems can come in many shapes and forms and in this section I will look at the issues which arise and some ways of handling them.

First, is the question of whether to create a separate institution or not. This is the route the UK followed in 1969 after an extensive planning exercise and the British Open University was born. On the other hand, Australia examined this model and decided to continue to rely on the work of existing institutions. This was based partly on the good work the existing institutions were already undertaking and partly on the relatively small population of a country such as Australia. The advantages of the centralised institution are that progress can be made more rapidly as its major aim is unencumbered by any other priorities within the institution: it provides a mechanism for controlling the large support system necessary; it can avoid duplication more easily; and is cost-effective. It also enables the country to build up a core staff of expertise in the new activities which are generated by distance learning institutions and the levels of quality of both materials and services can be maintained. Its disadvantages can be that it is too flexible and that new approaches to learning and use of new technology are spread less quickly throughout the staff of existing educational institutions. The widespread use of part-time staff is evidence in the UKOU of one way of overcoming this.

Distance learning systems rely on large numbers of students to make them cost-effective. How to get these students into the system may in itself be a significant challenge. Some potential students may not be aware of its existence. Some may not be able to afford the fee levels. So, whilst most distance learning institutions have a mixture of methods of achieving student target numbers, the extremes can be represented by the captive audience and the audience achieved through a commercial marketing operation. An example of a captive audience was the Primary Teachers Orientation Course at the AIOU in Pakistan. There, the teachers, up to 10,000 per semester, were directed on to the course through their Head Teachers and Education Officers. Whilst this may not be the best way of motivating students, it did act as a stable starting point to test out the overall system before many other courses were introduced: and that is an advantage not to be overlooked. Another powerful stimulator of student demand is the recognition of the qualification of the institution for the purposes of career progression, either through promotion or salary increase. This was one reason why 30 per cent of the original applicants to the open university were school teachers. The award offered was a degree on a par with those of other institutions which qualified for them for salary benefits.

The impact of the market place is strongly affected by the level at which the government of the country decides to subsidise the distance learning. For the undergraduate programme at the UKOU, the student fees comprise c.14 per cent of the total expenditure on that programme. Even in the same country, government policy can be different for different subject areas and target groups. By making appropriate grants or subsidising particular courses, there can be positive discrimination in favour of courses for nurses or courses in microelectronics. This has been demonstrated in two widely different fields in the UKOU. In 1980, though the remit to the university was to be self-financing in continuing education, the Department of Trade and Industry gave a special grant to the open university to prepare courses to raise awareness amongst managers in British industry about microprocessor developments. At the same time, the Health Education Council provided a grant as part of their long-term plan to use the open university expertise and systems to provide courses on parent education and health education throughout the UK at a reasonable price for individuals. Broadcasting agencies play a crucial role in advertising the provision of courses. Not only can they provide a preview of the education process, but can also be one way of telling the general public how they can register as students.

The next matter relates to the extent that the institution centralises control as against devolving responsibility to regional units. The UKOU is a centralised body although local tutorial and counselling arrangements are undertaken regionally: the courses are determined and created primarily by a central body of academics. On the other hand, the Universitas Terbukas in Indonesia effectively registers students with regional universities for tutorial support, rather than appoint individual tutors, and has a considerable amount of its academic materials prepared by consultants to a national curriculum. Clearly, geography, time and resource pressures played a considerable part here. Experience would suggest that the primary responsibilities of the central parts of the organisation should be to ensure that the system as a whole is working effectively; that the quality is maintained throughout the country; and to provide the validating processes for both the courses and the assessments of students. Course creation should also be undertaken at focal points backed up by the widest possible range of professional media support services. Well prepared materials are the essence of the distance learning system and distance education institutions will compromise these at their peril.

Measures of Success

The easiest outcome to measure is the throughput of the students. It is one of the economic facts that distance learning institutions need large numbers of students to justify their cost-effectiveness to their paymasters, so it is important for any head of such an institution to make this a first priority. The UK Open University stabilised at about 60-70,000 undergraduates per annum, although there are still more applicants than places for them. A continuing education programme has 50,000 students/clients per annum and is growing.

The second measure is status. Other institutions in the country can be suspicious initially but involvement of the staff and premises in a variety of ways can often mitigate against this. Then, the standing of the successful students with employers is important. In UK the fact that a student has undertaken further successful study in his own time is important to the employer and perception of the advantages of the distance learning method has led some employers to convert some of their own training to this mode.

The third measure is the quality of the materials and services particular for student success. Particularly, since the public exposure of print and broadcast materials leads to immediate judgements being made about the institution which are more difficult to make about other institutions as their teaching is unexposed to the general public. Maintaining quality is, therefore, an important matter.

The fourth measure of success is the extent to which a distance learning provision brings economic benefits to a country. Retraining technical, technologist and other professional manpower is already becoming a major activity in the UK as there is recognition that the supply of manpower trained in, and aware of, the new technologies is insufficient. In other countries, the special needs to develop vast human resources can be met, perhaps, only through distance learning systems and it may have maximum input in the rural areas which, at last, will have access to more education and training by the new methods.

Finally, the students' reaction to their learning experiences is important for success. They can lead, or deter, others to follow in their footsteps. In the longer term, we are finding that children of some of our first graduates in the UKOU are now also coming through the system, but certainly word of mouth is an important mechanism in motivating students to take up the courses.

Some Financial Aspects

The annual expenditure pattern for an open university is considerably different from that of an ordinary university (see Section 1.4). Academic staff costs can be down from the 60-70 per cent of the total budget they represent in conventional universities, to 25-30 per cent in the open university and that can include the part-time staff costs. A considerably larger administrative and operational staff is required and their costs are on a par with that for academic staff. In the early days of the UKOU, we created funding formula for the UKOU which both the university and the DES accepted. It was a formula which was based on both the number of courses produced and the number of students, as well as an overheads component.

One of the delicate balances it is necessary to maintain is that between what students are expected to provide for themselves, and what the university should provide. In the early years, for example, the UKOU provided audio-cassette players as part of a home experiment but in 1973, both because of a squeeze on the university's finances and because our surveys showed that more than 50 per cent of our students owned them, we decided to assume that students would own their cassette player just as we expected them to own a television set. More recently, the question has arisen as to whether we can expect students to have video cassette players or microcomputers as these became more widely used, but the danger is that if we follow this route we will be excluding more of the already disadvantaged students. Over 40 per cent of those who did not accept the offer of a place in 1985 did so because they could not afford the cost.

More recent financial pressures have led us to investigate ways of producing low resource courses; of entering into collaborative arrangements to reduce costs; of examining whether reduced tutor support etc., is possible at the higher academic levels. But there is a limit to cuts which can be endured before the institution becomes cost-ineffective and we are in danger of approaching that point now.

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Table 16.1

APPENDIX : Some Basic Statistics of the U.K. Open University

1. Area of main campus at Walton Hall—30 hectares (or 70 acres)

2. University Buildings

		m^2
Walton Hall:		
Academic		26,000
Administrative & Operations		23,000
BBC/OU Production Centre		11,000
	TOTAL	60,000
Regional Offices:	TOTAL	23,500
Warehouses (off main campus)	TOTAL	16,500
	GRAND TOTAL	100,000

3. Full-Time Staffing Levels, January, 1985.

Central Academic	455	
Regional Academic	220	
Course/Research Support	233	
Academic Administrators/Library	458	
Secretarial/Clerical	975	
Technical	147	
Artisans/Ancillary/Printing, etc.	213	
TOTAL		2,701

4. Part-time Tutorial and Counselling Staff		c.5,200
5. Undergraduate Statistics 1984		
New Students Enquiries	98,600	
Applicants	41,500	
Intake	21,700	
Finally Registered		15,400
Median Age-32 Years		
Continuing Students : Finally Registered		51,300
TOTAL OF FINALLY REGISTERED UNDERGRADUATES		66,700
Female	45%	
Disabled	3%	
Those with educational qualifications lower than that normally required for entry to a conventional university	36%	

Table 16.1 (contd.)

TOTAL OF FINALLY REGISTERED COURSE POPULATIONS (Students may take more than one course)			79,300
Split between Arts and Science based courses	50/50		
TOTAL WHO PASSED EXAMINATIONS		56,700	
Number of undergraduate courses		131	
6. Graduate Statistics 1984			
BA Graduates			5,950
Female	49%		
CUMULATIVE TOTAL			69,300
7. Post graduate Statistics 1984			
Total Students			850
Part-time research			540
Full time research			170
Taught higher degrees			140
8. Continuing Education 1984			
Students on courses in the programme			14,750
Course packs sold			38,000
9. Summer Schools 1984			
Number of locations			20
Number of attenders			35,650
10. Assessment 1984			
Number of computer marked assignments			223,000
Number of tutor marked assignments			456,000

11. Operations 1984

Number of Home Experiment Kits despatched		223,000
Number of other packages despatched		3,600,000
Number of non-broadcast audio-cassettes despatched		380.000
Number of transmissions per year	TV	2,700
	Radio	900
Total hours of transmission per week	TV	36
	Radio	13

17

DISTANCE EDUCATION: THE EXPERIENCES OF OPEN UNIVERSITIES

BAKHSHISH SINGH

The Indira Gandhi National Open University was established in 1985, in New Delhi, India, under an Act of Parliament. The foundation stone-laying ceremony was performed by the Prime Minister, Mr. Rajiv Gandhi, at a colourful function on 19 November, 1985 at the 100 acres site at Maidan Garhi, New Delhi, where a well planned campus of the university is to be built. Addressing the audience on this historic occasion, the Prime Minister observed that the establishment of this university would fulfil the promise that Mrs. Indira Gandhi had made to the people for democratising education so that it may be within the easy reach of everyone. This university, the Prime Minister said, has been given the stupendous task of taking education right to the doorsteps of the people even in the remote rural and backward areas, and of making education relevant to our national needs.

The formal opening ceremony of the university was followed by an international seminar on 'Distance Education: Experience of Open Universities', from 20 to 22 November, 1985. The Union Minister Mr. K.C. Pant who inaugurated the seminar hailed the establishment of the Indira Gandhi National Open University as a significant step towards democratisation of education which should help in making education relevant to national needs. Nine Vice-Chancellors/Pro-Vice-Chancellors/Senior Academics from open universities in the UK, Canada, Japan, China, South Korea, Indonesia and Spain, and over 25 Vice-Chancellors/Professors from universities in India and a number of eminent educationists participated in the seminar.

In her keynote adress Dr. (Mrs.) Madhuri R Shah, Chairman, University Grants Commission, commended need-based and non-examination enrichment courses, middle-level vocational courses as well as conventional degree and masters level courses, with special emphasis on quality, mobility of students and audiovisual support. The motto of the open univeristy, she said, should be, 'Nothing but the best'.

There were, in all eight business sessions during the three-day seminar on:

I) Identification of courses and preparation of course material.
II) Organisational structure of open universities.
III) Role of media in distance education.
IV) Admission requirements and student profile.
V) Evaluation in distance education.
VI) New Education Policy and role of distance education.
VII) Financing distance education.
VIII) Assignments, contact programmes and student support services.

A number of specific issues were raised pertaining to the various topics discussed during the business sessions, and that resulted in very useful and relevant discussions. The participants from open universities abroad responded to the various issues related to different topics by narrating their experiences, the problems encountered and the solutions arrived at. The Indian participants posed numerous questions to elicit further responses from their foreign counterparts and also made useful suggestions.

Sessions

Identification and Preparation of Courses

The first business session on 20 November, 1985 was devoted to the identification and preparation of courses. Prof.G. Ram Reddy in his opening remarks suggested that the deliberations at various sessions, as far as possible, should be focused on the various issues listed under each topic.

Six issues were raised on the topic "Identification and preparation of courses" which elicited a very enthusiastic response from the delegates. The thinking that emerged on various issues raised at this session was as under:

Before identifying courses, the different types of educational programmes to be undertaken should be identified, such as, traditional education, adult education, vocational education: levels of courses—non-degree, and credit and non-credit programmes, etc. For identifying courses under these categories, reports of various surveys already done could be useful. Some fresh surveys could also be taken to determine the demands of various sectors of society and work-force not already covered by earlier surveys. We must also keep in mind national goals, Planning Commission reports, growth pattern, job potential, employment exchange registrations for different types of jobs, need of in-service training for different vocations and functional literacy needs of adults. Special attention would need to be paid to education of women, and backward sections of the society to remove social imbalances. Consultations with various organisations, industries and departments in the public as well as private sectors could be useful. The general experience of educationists and educational administrators could also be a good guiding factor.

Regarding the preparation of course material, the deliberations favoured some sort of team approach, though cost factor and differences of opinion could pose problems. The best academics, editors, educational methodologists, media and production experts should constitute the course teams. However, there should be no rigidity in this regard. If guidelines on format, content, style, etc. are prescribed, individual subject experts could also be entrusted with course writing work.

It was felt that some foundation or bridge courses for some sections of students should be provided to bring them up to the average standard. Try-out of course material on target groups could be useful. Various devices of feedback, in the form of self-check exercises and assignment questions, should be built into the course-material.

Organisational Structure

During discussions in the session on 'Organisational structure', two significant types of structures emerged:

1. Centrally controlled structure on a nation-wide scale.
2. Independent autonomous institutions—having multiple parallel systems.

Under the first category, such monolith systems are included which are largely government controlled with an elaborate network of sub-systems at provincial and local levels. In this system, the centre is responsible for planning the courses and broadcasts/telecasts to the whole country. The sub-systems at provincial levels are controlled by the central organisation with respect to the administrative and educational activities. The entire package is developed at the central level, leaving scope for regional variations.

In the same category are the systems which are autonomous in their governance and which assess their own needs and devise policies accordingly, though in a centralised manner. A majority of the institutions fall under this category.

The other major category is where multiple systems operate at parallel levels. They are wholly autonomous in character, as in Canada, where more than one university, having open learning systems, is operating. The programmes or courses they float are not restricted by jurisdictional limits.

Both these categories of institutions have evolved structures which do not vary much from each other. They have bodies parallel to Councils, Senate, Academic Boards, Faculties though using different nomenclatures.

In so far as the operational aspect is concerned, three major divisions emerged within a system.

1. Educational or course production division.
2. Students services or support services.
3. General or administrative wings.

Within these, different sub-structures emerge which vary according to the design of study adopted by the system.

All the universities have developed a network of regional centres and study centres. These are extensively used mainly for providing additional information, face-to-face contact programmes and counselling. Largely, the services of local agencies and personnel are obtained. These agencies are both public and private. In this context the experience of Spain and a number of other countries is significant, where such agencies provide the buildings, equipment, material and pay for the personnel employed. In Korea, this cooperation is sought at the level of sub-local study centres wherein teaching staff for the university and cooperating institutions come together to provide services to the students.

Role of Media in Distance Education

In the session on the 'Role of Media in Distance Education', foreign delegates gave interesting accounts of their experiences with the media. In China, printed materials, radio and TV were all used in distance education. The Chinese use TV for nation-wide programmes viewed by large audiences.

In specialised courses, TV was not used since such courses catered to small audiences. The use of TV also depended upon the subject matter to be handled. In China, printed materials are the cheapest, while TV is very expensive. However, students prefer TV. Students are generally not used to self-study. They prefer teacher-centred study. Efforts are being made to encourage self-study among distance education students. TV programmes cover 50 per cent in science and engineering courses, but hardly cover 20 per cent arts and social sciences.

In Korea, both radio and TV are used in distance education programmes. Radio broadcasts, however, are not properly aligned with the students' free hours and, hence, there is a preference for audio cassettes. Video cassettes are also produced by the open university. Viewing and listening facilities are available at the study centres.

In Spain, radio and print materials are the principal media of communication. Audio cassettes are made available at the study centres. TV is considered prohibitively expensive. In the total delivery system, print material covers 80 per cent and radio 20 per cent.

In Japan, heavy reliance is placed on TV and radio. Audio cassettes are also used very liberally. Seventy per cent of the students have video cassettes and 99 per cent have audio cassettes. Televised courses are supplemented by the print materials and contact programmes. Fifty per cent of the delivery system comprises TV and radio broadcasts.

In the UK, the television programmes of the open university are a very great attraction. The national TV programme is effectively used in distance education. However, students consider video cassettes more useful than TV.

In Canada, the telephone is used besides radio and TV for distance education. The telephone occupies a weightage of 30 per cent in the delivery system, radio 10 per cent, TV 15 per cent and print material 45 per cent. TV programmes are very successful. Satellite transmission is considered very cost-effective.

In India, so far, only six institutes out of 30 arrange radio talks for their students and TV support is not available at all. However, some educational programmes are relayed from TV centres but these are not student-based; they are of very general nature. The need for TV support for distance education instruction, however, is being strongly felt. The socio-economic profile of distance education students rules out the possibility of purchase of audio or video cassettes by them in the near future. Community TV viewing and community or even individualised listening are the only means that can help the effectiveness of the media. The participants of the Space Application Centre of Ahmedabad contended that TV costs are not very high in India. The Centre, it was pointed out, has developed low-cost television equipment. We must, therefore go in for LITTLE MEDIA, rather than think in terms of elaborate and expensive TV studios.

However, TV transmission should be decentralised and each place should have a low-cost studio facility. With the commissioning of INSAT-1C, it would be possible to have a separate channel for educational broadcasts.

TV software can be prepared very cheaply in India if academics are trained in handling TV cameras and other supporting equipment.

A question was raised about the sensitivity of government controlled TV and radio to programmes in social sciences and it was felt that open universities should have autonomous and separate radio/TV channels.

Admission requirements

It was emphasised during the session on 'Admission Requirements' that the basic consideration governing admission in the open universities should be to provide education to all those who can benefit, with special emphasis in favour of working people, housewives, dropouts from the formal system and other disadvantaged sections of society.

True to their objectives, the admission requirements in open universities are far more liberal than those obtaining in the conventional systems. In some of the countries like the UK, the minimum age is the only limiting factor. The minimum age requirement varies from 18 to 21 years. There are some other countries where minimum age has not been specifically prescribed but students have to attain a minimum qualification before seeking entry. In Indonesia, Japan and China they should have passed the high school or equivalent examination. These countries also accommodate the spill-over of Entrance Examination held for entry into conventional universities.

In a number of countries, the demand for the open learning systems is overwhelming. In Spain, within a decade, enrolment has increased from roughly 11,000 to 87,000. In China, on the other hand, nearly one million students have registered with the CRTV.

Some sort of screening procedures too, have been devised by these systems. In China, the students have to be sponsored by their employing agencies, while in Korea they are admitted on the basis of performance in the qualifying examination. In the UK the students are admitted on a first-come first-serve basis, though admissions are regulated, if necessary, to have proper regional balances. The need for the regional balancing, perhaps, may also arise in the case of the Indira Gandhi National Open University, particularly in view of the limited choice of medium of instruction, i.e. English, Hindi, as has been the experiences of the Open School operating in Delhi in similar circumstances.

A majority of the distance education students in advanced countries are employed. In developing countries this ratio is much lower with the exception of China where 90 per cent of the students are employed, whether taking full-time or part-time courses.

The most exhilarating feature of the open learning system is that it has come as a great boon for the physically handicapped persons. The open university in the UK has more disabled persons as its students than all the disabled persons put together in conventional universities. The Open School in India too has an increasing number of disabled students, particularly because they are exempted from tuition and other fees.

Evaluation in Distance Education

The session on 'Evaluation in Distance Education' discussed the areas of student evaluation as well as institutional evaluation.

Most open universities follow a combination of the classical mode and computer-marked systems. Overall evaluation of students is done on the basis of continuous assessment and examinations. Evaluation can, however, vary according to the delivery system used. The major formats used are projects, traditional examinations, self-assessment and computer-assisted learning question banks. The role of tutors is fairly strong though variable.

The institutional assessment is done through an efficiency study carried out by outsiders and the response of 'customers'. It was emphasised that an open university should, from the very beginning, set evaluation standards in a manner which would establish credibility and confidence in its evaluation system. The open universities should avoid the pitfalls of the evaluation system of conventional universities.

New Education Policy and role of Distance Education

The papers presented at the session and the discussions that followed indicated that distance education has already emerged as a viable system for higher, adult and continuing education. But the conventional and distance education systems should operate in a mutually supportive role. The following points were emphasised:

1. Materials should be standardised for all distance education.
2. Focus should shift to vocational education.
3. The open university should tackle the problem of teacher obsolescence.
4. The open university should take over the load of ever-increasing numbers at the undergraduate levels in arts, commerce and general science classes.

The Union Minister for Human Resource Development, Mr. P.V. Narasimha Rao, who also attended this session said that the exploratory stage of the Indira Gandhi National Open University should be exciting, even though controversial. The IGNOU should benefit from the experiences of open universities in other countries, with due attention to our special needs. The open and traditional universities should be complementary to each other but innovation must find a special place in the open university. He recommended recruitment of teachers on deputation or contractual basis, with certain incentives to attract good teachers. There is tremendous expectation from an open university. The areas of teacher education, vocational education and in-service training courses should be considered as priority areas. Collaboration with private sector organisations for training/retraining workers should be seriously pursued.

Financing Distance Education

During the session on 'Financing distance education', participants from abroad gave useful information about their open universities: In Indonesia, three sources of financing were available; student tuition fees, state grants and assistance from foreign agencies. The contribution of the fee component was 33 per cent and 66 per cent was contributed by the state and foreign agencies.

In Spain, the contribution of the Ministry of Education was 46 per cent; student fees accounted for 47 per cent and sale of books contributed about 7 per cent of the total costs. Besides this, provincial governments and banks bore the cost of running study centres. A student paid $ 240 a year as fees. However, printed material is purchased by the student on a personal basis.

In the UK, the fee component constituted 15 per cent of total costs and the State contribution was 85 per cent. However, in non-degree programmes, the fee component was two-thirds and special grants provided one-third. Costs were 25 per cent higher in science courses than in arts and social science courses.

In China, there are two categories of students: registered and previewers. Registered students are not required to pay fees but previewers are required to pay fees. Since previewers are generally unemployed, their parents pay the fees which are of the order of $ 200 for three years. Students cannot afford to pay for video-tapes, but audio cassettes are very common. A World Bank loan was used to equip 85 study centres, to set up nine transmitters in nine big cities, as also to equip laboratories and libraries. Pressure from society on the TV University is very high. Since the authorities think that distance education is very cheap, there is a high degree of reluctance to provide adequate financial support.

In Canada, State grants account for 75 to 80 per cent and tuition fees 10 per cent. The remaining 10 to 15 per cent is provided by entrepreneurial or business activity by the university. Continuing education programmes are revenue generating. Research projects for the government and private sector are also used for revenue raising. The private sector, too, can contribute funds to open universities. The government gives matching grant to the contribution made by the private sector.

In Korea, the state contribution was 60 per cent and student fees accounted for 40 per cent. No financial support was received from international organisations. Adequate funds were not available for agriculture, computer science and physical sciences programmes to set up laboratories.

In Japan, tuition fees account for 15 per cent of the cost. The rest was contributed by the government. A student pays 3,000 Yen per year which includes cost of course materials. Scholarships, though available, are not applied for by the students, because a large number of students are employees or housewives and are not eligible for scholarships. For capital costs, block grant on a 5-year basis are made available; for maintenance cost, grants are available on an annual basis. The basis of grants is the number of courses and the number of faculty members. In UK, however, the number of students and the number of courses was the basis for negotiation of grants from the state. In Canada, block grants were provided. The institution has the freedom of allocation to the capital expenditure or maintenance expenditure.

In India also, the thinking at central and state levels as also at the university level is that correspondence course should be self-financing. This has done great damage to the development of distance education in the country. Whereas the state subsidises to the extent of 91 per cent in regular colleges and universities, and the student pays only 9 per cent in the form of tuition fees, the degree of state support is totally absent in some distance education units and is inadequate in others.

Better quality of distance education will require better human and physical infrastructure to operate the system and for this adequate financial support is necessary.

Assignments, contact programmes and student support services. Due to paucity of time there was very little discussion on Assignments, contact programmes and student support services'. However, the consensus was in favour of regular submission and evaluation of student assignments, careful grading and quick turn-around. Short face-to-face teaching sessions or contact programmes were generally favoured by the students. It was strongly felt that well-organised student services should be a must for the open university and distance institutions.

The concluding session on 22 November, 1985 was chaired by the Minister of State for Education and Culture Mrs. Sushila Rohatgi. The Minister of State for Information and Broadcasting, Mr. V.N. Gadgil, delivered the valedictory address. Mrs. Sushila Rohatgi emphasised the need for radio and television support to the Indira Gandhi National Open University. Mr. Gadgil agreed with this but did not see much scope in the near future for providing adequate TV support because of various limitations.

The seminar concluded on a note of optimism on the possibilities of close collaboration among the open universities all over the world.

APPENDIX

Addresses of the Open Universities

The U.K. Open University, Walton Hall, Milton Keynes, MK7 6AA,
United Kingdom.

Sukhothai Thammathirat Open University, 9/9 M009 Tambol
Bangpood, Nonthaburi-11120, Bangkok, Thailand.

The Open University of Sri Lanka, Post Office Box 21, Nawala,
Nugegoda, Sri Lanka.

Allama Iqbal Open University, Islamabad, Pakistan.

Korea Air & Correspondence University, 169 Dongsuog-dong,
Chongro-ku, Seoul 110, Korea.

University of Air, Wakaba, 2-Chome, Chiba, 260 Japan.

Universitas Terbuka, Kotak POS 6666, Jakarta-10001, Indonesia.

Fern Universitat, Fleyer Strasse 204, D 5800 Hagen, West
Germany.

Athabasca University, Box 10,000, Athabasca, Alberta,
Canada TOG 2RO.

Central Radio & Television University, Beijing, China.

Universidad Nacional de Educación a Distancia, Madrid, Spain.

Indira Gandhi National Open University, K-76 Hauz Khas, New
Delhi-110016, India.

Andhra Pradesh Open University, 6-3-645, Somajiguda, Hyderabad-500482 Andhra Pradesh, India.

INDEX

Admissions, 9, 102, 258-259
Adult Higher Education, 48-49
Agricultural Education, 189-190
Air and Correspondence High Schools (Japan's), 171
Alberta, University, (Canada), 20, 21, 22, 23
All India Radio, 101
Allama Iqbal Open University (AIOU) (*See* Pakistan)
Ambalangoda, 222
American Consortia for Distance Education, 201
Amparai, 222
Andalucia, 213
Andhra Pradesh, 111
Andhra Pradesh Open University (APOU) (*see also* India), 8, 9, 10, 11, 12, 14, 15, 94-106, 111: Admission Policy, 102; Course Structure, 97-100; Evaluation System, 103-104; Finances, 104-105; Instructional Methods, 101; *OPVARSITY NEWS*, house journal, 103, objectives, 95-96; organisational structure, 96-97; Preparation of Course Material, 100-101; Student Enrolment and Performance, 102-103
Anuradhapura, 222
Apple Laserprinters, 34
Assignments, 262
Athabasca University (AU), Alberta (Canada), 8, 9, 19-43, 83, 203: Academic Programmes, 28-29; Course Delivery, 34-36; Course Design and Production, 31-34; Course Planning and Development Model, 30-31; early years, 19-23; Emerging Implications, 42-43; Faculty and Staff, 26-28; Mission, 23-24, 28; Organisational Structure, 25; primary purpose of establishing, 20; Regional Centres and Learning Centres, 37-38; strategies, 24; Student Assessment and Examinations, 36-37; Student Support System, 38-41; Students, 41-42; two primary academic functions of, 26
Audio and Video Material, 172-173: Audio-and Video Cassettes, 86-87, 257; Audio-Visual Devices, 219
Australia, 1, 6, 56, 245
Autonomous Institutions, 6
Autonomous model of distance education, 16

BBC, 10
BPM of Radio Semargang, 139
BPM of Radio Yoga, 139
BPM of Televison Surabaya, 139
Badulla, 222
Bangladesh, 179
Bartels, 76, 77
Basque Country, 213, 214
Beijing Television University, 56, 57
Berkeley, 19
Bhatti, 179
Bihar, 121
Bildschirmtext Rechnerverbund fiir Dialog system (BIRD) Project, 91
Brindley, 38
British Open University (*see* UK)
British Prestel System, 90
Broadcasting, 57; Broadcast Lectures, 173
Byrne, Tin, 20, 21

CCTV, 70
CENEBAD (National Centre for Basic Education at a Distance), 201
CETV, 70
Canada, 6, 7, 11, 14, 20, 23, 24, , 35, 56, 253, 257; Athabasca University (*see* Athabasca), 19
Calgary, 38; University of, 20
Catalunya, 213, 214
Central Institute for Distance Study Research, 92
Centre for the Development of Distance Teaching Material, 92.
Chaya-Ngam, 231
Chilaw, 222

China, 6, 7, 10, 11, 14, 56-74, 203, 253, 256, 258, 259, 261: Adult Higher Education, 48-49, Levels of, 53-55, programme, 53; brief historical account, 57-58; Central China Televison, 65; Central People's Radio Station, 44, 65; China Science and Technology University, 47; Chinese Academy of Social Sciences, 44, 47; Cultural Revolution, 49 51, 57; Current Educational Reforms in, 44-55; education as a high priority, 44-45; Higher education, 46-47; Nine years compulsory education, 46; problems and objectives, 45; positions and function, 58-59; Plans for expansion of TVUs, 73-74; Radio and Television systems of Higher Education, 59-63; reflections, 51-55; State Education Commission, 48; TV universities, 58
(China's) Central Radio and Television University (CRTVU), 8, 9, 10, 14, 15, 49-51, 56, 57, 59, 60, 61, 63, 70, 73, 74, 203, 258, Courses of Study and Use of Media, 63-67
Colombo, 222
Coldeway, 38
Communication System (*see also* Media, Print, Radio, Television), 138-139, 257
Community Education, 242
Computers, 240: BTX-Computers Network, 91; Computer Centre, 87-89; Computerised Counselling, 89-90; IBM-Computers, 87
Connors, 13
Contact Programmes, 262
Continuing Education Programme, 8, 63, 240-242
Corea, Gamini, 215
Correspondence Education, 1, 2, 48, 109: Correspondence institutions, 2; Correspondence programmes of private schools, 2
Cost-Effectiveness, 15-17
Costa Rica, 6, 7, 203
Courses, Choice of, 9-10

Desk Top Publishing techniques, 34
Distance Education System (Learning), 43, 75, 125, 138, 162, 175, 180, 195, 253-262: Characteristics, national, 4, 56-74; conference of International Council on Distance Education (1982), 83; definition, 1-5; Distance Learning Programme Units (UPBJJ), 129; Economics of, 232; Evalution in, 259; Experience of Open Universities, international seminar on, from 20 to 22 November (1985), 253; Financing, 260-261; How (Method of), 6-8; IGNOU's Role in, 120-123; Issues that Arise, 245-247; New Education Policy and Role of, 260; Objectives, 8-9; Rationale for, 243-245; Role of Media in, 256-258; why (need of), 5-6
Dutt, 111

Edmonton, 38
Education a distancia, 2
Education at Home or Work, 236-237
Education Media Development Centre, 172
Educational Consultants India Ltd (1985), 112
Enhanced delivery (PED), 35
Enrolment, 11-12
Europe, 2
Everyman's University (Israel), 202, 203
'External Appearance (private appearance)', 2
External System, 1
'Extramural', 2

Federal Republic of Germany (FRG), 75-80, 84; German Universities, 79, 87; Fernuniversitat (FU), 9, 11, 15, 75-93, 203
Fernstudium or *Fernunterricht*, 3
Fort McMurray, 38
France, 2, 6

GBPP, 132
Gadgil, V.N., 262
Galizia, 213
Galle, 222
Gandhi, Indira, 253

Gandhi, Rajiv, 112, 253
Garrido, Manuel J. Garcia, 201
Governance, 13-14
Griew, Stephen, 83
Gujarat, 121
Gunatilake, P.D., 215

Harry, 3
Health and Social Welfare, 241
Heilongjiang Provincial TV University, 64
Higher Degree Programme, Research and, 242-243
Holmberg, 4, 79, 125
'Home Study', 1
Hughes, 19

IBM microcomputers, 34
INBAD (National Institute for Secondary Education at a Distance), 201
INSAT-1C, 258
'Independent Study', 1
India (*see also* Andhra Pradesh), 6, 15, 17: Correspondence Education; 109; National Open University, 112-113
Indira Gandhi National Open University (IGNOU), 7-8, 9, 10, 12, 14, 15, 107-123, 253, 259, 262: Academic programme, 116-118; Act (1985), 112, 113; Bill, 112; Finances of University, 119-120; Governance, 113-116; Instructional Methods, 118; Preparational Course Material, 118; Role in Distance Education, 120-123; Staffing, 119
Indonesia, 6, 7, 15, 124, 136, 253, 258,; Universitas Terbuka (UT), 8, 9, 13, 15, 124-144; Academic and Examination System, 135-137; Faculty Academic Programme, 127-129; Management of, 129-135; Monitoring Expansion of, 138
Institute for the Development of Distance Teaching, 86
Instructional System, 10-11:Instructional Materials, Development of, 132; Monitoring the, 137-138
Interative Videotex, 90-93
International Centre for Research and Development, 197
International Education Year, 110

Iran, 202; Free University, 202
Israel, 7; Everyman's University, 202, 203; Israeli Knesset, 202

Jaffna, 222
Japan, 6, 7, 56, 94, 253, 258, 261: Japan Society for the Study of Radio-TV Education, 56; Japan's University of the Air (UA), 8, 10, 11, 12, 13, 145-160, 201: Aims of, 146; Characteristics of Students, 156-158; Evaluating Students work, 153-159; Faculty, 147-149; Financial Affairs, 159; Foundation, 159; Guidance by Correspondence, 153-159; Impact of University of Air upon System of Education in Japan, 160; Relation to the Government, 160; Need for establishment of, 145-160; Organisation, 146-147; Organisation of Courses, 149-151; Student Classification Enrolment Statistics, 151-153; System of Study, 151-152
Jawaharlal Nehru University, 110
Jevons, 1
Jiangsu Provincial TV Univesity, 72

Kalutara, 222
Kandy, 222
Kaye, Anthony, 5
Keegan, 1, 2, 3, 4, 5, 6, 7
Kegalle, 222
Kerala, 121
Korea, 6, 161, 162, 165, 172, 175, 177, 257, 259, 261: Air and Correspondence High Schools, 162, 163, 177; College Entrance Examination, 162; Distance education in, 161-177; GIRE, 162; Korea Broadcasting System (KBS), 167; Korean Education Development Institute, 163, Seoul National University, 163; TOEFL, 162
Korea Air and Correspondence University (KACU) 12, 161-177; Academic Affairs, 166-169; Audio and Video Material, 172-173; Broadcast Lectures, 173; Computer Processing Centre, 164-165; Cooperating Institutions, 176; Distance Education

Research Centre, 164; Drop-out, 173-174; Education Media Development Centre, 164; Experimental and Practical Work, 174-175; Finance, 170-171; Media Productions-Printed Material, 171-172; Organisation, 163-166; Problems and Issues, 171-176; Publishing Department, 164; Student affairs, 169-170; Students Association, 165; Student Guidance Centre Association, 165; Centre, 164; University Newspaper Unit, 164; Whole Man Education, 175-176
Kothari D.S., 94, Kothari Committee, 109
Kuffner, 76, 77
Kurunagala, 222
Kyonggi Open University, 175

LESSONS, 219
LITTLE Media, 258
LOTSE System, 87, 88, 91
Learning Centre, 37-38
Learning, Materials, distribution of, 135
Lethbridge, University of, 20
Liaoning Provincial TV University, 71
Local Centres, 14-15
London external system, old, 1
Lougheed, Peter, 20, 21

Mackenzie, 2, 3
Madhya Pradesh, 121
Maharashtra, 121
Mahidol University, 16
Mastery Model instructional programme, 37
Matara, 222
McCormick, Robert, 56, 57
Mclnnis-Rankin, 38
Media (*see also* Communication system): BPM of Radio Semargang, 139; BPM of Radio Yoga, 139; BPM of Televison Surabaya, 139; Media services, 34; Multi-media approach to education, 10; multi-Media Techniques, 237; Role of Media in Distance Education, 256-258
Mixed model, 6-7; Mixed or Hybrid Institutions, 6
Moore, 4

Nawala, 222
Nepal, 179
Netherlands, 6, 7; Open University of Netherlands, 203
New Zealand, 2, 6,
Nishimoto, Dr. Mitoji, 56
Non-formal Education, 195
North America, 1, 2, 19

Off-Campus study, 1
Open Business School, 241
Open Learning, 2, 3, 4
"Open Learning System and Problems in Post Secondary Education", 2
Open School in India, 259
Open University (System), 2, 203: Admission requirements, 258-259; concept, need, and organisational form of, 1-17; Different Academic Programmes, 237-243; Early efforts, 110-111; Experiences, 253-262; Financial aspects, 248-249; Identification an preparation of courses, 254-255; Measures of Success, 247-248; Organisational structure, 255-256; Special Features of, 236-237
Orissa, 121
Osmania University, 94, 111

PBJJ, 136
PELITA IV, 124
PRVUs, 64
PTVUs, 59, 60, 61, 63, 65, 70, 74
Paced Enhanced Delivery (PED), 34, 36
Pakistan, 6, 7, 16, 178-198: Allama Iqbal Open University (AIOU), 10, 16, 178-198, 203, 246: Agricultural Teachers' Orientation Courses (ATOC), 187; Basic Functional Education Programme (BFEP), 191; Cetificate of Teaching (CT), 187; Civil Education Project, 190-191; Education Policy (1972-80), 180; Instructional System, 184; Integrated Functional Education Projects, 190; Institute of Educational Technology (IET), 191-192; Organisation, 181-183; Origin, 178-183; Primary Teacher's Orientation Course (PTOC), 187; Primary Teacher's

Certificate (PTC), 187; Programmes, 184-188; Projects, 190-191; RICE Project, 191; Regional Services, 193-195; Research and Statistical Centre, 196-198; Service Training, 195-196; Special Education Project, 191; Special Features, 178; Teacher Education Programme, 187-188; Vocational Education, 188; Women's Education, 188
Pant, K.C., 108, 123, 253
Part-time study, 2
Parthasarathi, G., 94, 110
Paul, 19
Peng, Li, 48
Personal and Cultural Education, 242
Personal Contact with Staff, 239, 240
Petter, Otto, 4, 202
Polytechnic Schools, 46
Postgate, 2, 3,
Print material, 257
Professional Development in Education, 241-242

RICE (Regional Institute of Complementary Education (Pakistan), 191
Radio, 48, 49, 57, 188, 194: Provincial Radio, 15; RRI (Radio of RI), 139; Radio and Television Systems of Higher Education, 59-63; Radio and TV Teaching Programmes, 65; Radio Broadcast, 196, 257; Radio contributions, 84; Radio Programmes, 3, 11; Radio University (ies), 49-51, 58, 73, 74
Rajasthan, 121; Regional Services in, 193-195
Rama Rao, N.T., 95
Rao, B. Kesava, 96
Rao, B.R., 95
Rao, B. Sarveshwar, 95
Rao, V.K.R.V., 110
Ratnapura, 222
Reddy, N. Chandra Mouli, 95
Reddy, Prof. G. Ram, 7, 12, 13, 94,111, 254
Reddy, Vijay Bhaskar, 95
Regional Services: Regional Centres, 14-15, 37-38; Regional Learning Programme Units, (UPBJJ), 135; Regional services in Rajasthan, 193-195
Registration, monitoring, 138
Research and Higher Degree Programme, 242-243
Rohatgi, Sushila, 262
Ruggles, 2, 3,
Rumble, Greville, 2, 3, 6, 7, 94

SIPENMARU, 132
SKS, 136
SMA, 87
Satellite transmission, 257
School of Correspondence Courses of Delhi University, 109
Schramm Commission, 202
Scupham, 2, 3
Secondary Vocational Education, 63
Senior High School (SHS), 124
Service Training (Pakistan), 195
Sah, Dr. (Mrs) Madhuri R, 11, 253
Shanghai, 57; Shanghai TV University, 64
Sharma, 5
Shenyang, 57
Shobe, 36
Singh, 111
Single Side Band (SSB), 126
Smith, Dr.Sam, 16, 20, 22, 243
Social Welfare Council of Thailand, 227
South Africa, 7
South Asia, 179
South Korea, 253
Space Application Centre, Ahmedabad, 258
Spain, 6, 7, 15, 56, 200-214, 253, 257, 258; Spanish Education, 200-201; Universidad Nacional de Education a Distancia (UNED), 8, 15, 200-214: Circumstances leading to establishment of, 200-202; course structure, 205-206; Finance, 213; important decision makers in University, 204; Instructional methods, 206-207; objectives, 202-203; Problems and prospects, 213-214,; organisational structure of University, 203-205; Rector of, 201; Staffing pattern, 205; Students and their backgrounds, 207-212; Unidades Didacticas, 206
Sri Lanka, 7, 215-224,; External Services Agency (ESA), 215; Institute of Distance Education (SLIDE) 215;

Open University of Sri Lanka: Audio-visual Devices 219; Course being offered now, 220-221; Course preparation and production, 218-220; Evaluation Assignments and Examinations, 222-223; Finances 223-224; Issues-Problems being faced, 224; Management Structure, 216-217; Objectives, 215-216; Regional centres, 219; Regional Educational Services (RES), 221-222; Staff, 217; Student, 221; University Act No.16 of (1978), 215, 216

Srisa, Wichit, 15, 16

Students, 41-42; Students Evaluation, 12-13; Students Materials Unit, 40-41; Students Services, 40, 262; Students Support System, 38-41

Sukhothai Thammathirat Open University (STOU) programmes (*see* Thailand)

Tayler, 6

Teaching Materials, 239

Tele-enseignement, 2

Televison (TV); 11, 48, 49, 57, 59, 256-258, 262; ACCESS Television, 34; Programmes, 3, 66, 188, 194, 196; TVRI (Television of RI) 139; Television Corporations, 85; Television University (ies) (TVUs) 15, 44, 49, 51, 57, 58, 59, 60, 61, 63, 64, 65, 67-70, 73, 74, 84, 261: Achievements and Limitations, 71-73;Categories of students and Modes of Learning, 67-70, Financial Resources and Cost Effectiveness, 70-71; Plans for expansion in China, 73-74

Thailand, 6, 7, 15, 56, 225-233: Ramkhamhaeng University (Thailand), 225; Social Welfare Council of, 227; Sukhothai Thammathirat Open University (STOU), 11, 15, 16, 225-233: Academic Programmes, 227; Academic Staff, 228; Administrative Organisation, 230-231; Economics of Distance Education, 232; Education System, 229; Objectives, 226-227; Methods of Instruction, 229; Students, 228-229; Study Centres, 231-232

Tongji University, 72

Turkey, 179

Tutorial Services Unit, 40

UAR, 179

UK, (Britain), 6, 11, 16, 21, 94, 235-252, 253, 258, 259: British Open University (UKOU), 7, 9, 10, 11, 12, 13, 14, 15, 21, 56, 75, 79, 84, 94, 178, 180, 201, 202, 203, 226, 235-252: Financial Aspects, 248-249; Measure of Success, 247-248

UNESCO, 2, 94, 107; Commission on Education, 106

UPBJJ, (*see also* Regional Services), 129, 135, 137, 138, 140

USA (United States of America), 56, 94; Vanderbilt University, 72,

USSR, 6

Undergraduate Programme, 238, 239

University Grants Commission, 119-120

University of South Africa, 202

Uttar Pradesh, 121

UTRs, 162

Venezuela, 6, 7; Universidad Nacional Abierta (UNA)of Venezuela, 203

Venkatram, Bhavanam, 95, 111

Video Cassettes, 257

Vietnam, 19

Vocational Education, 188

Wedemeyer, 4

West Bengal, 121

West Germany, 7, 15

Women's Education (Pakistan), 188

World Bank, 66, 73, 261

Xiaping, Deng, 45, 49

Ziyang, Premier Zhao, 45, 48, 73

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